

# The LG Report

A publication of the Chemistry REU Leadership Group

## News Headlines:

- A tough funding year ahead for new Chemistry REU sites
- LG activities at the Atlanta ACS emphasize collaboration, diversity
- Art Ellis says “cybersize it”

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## Pan REU Workshop a Success

The NSF-REU program is a massive endeavor, with more than 600 sites across the country and around the world. These sites involve a variety of disciplines and target a myriad of student sub-populations. Despite this diversity, there are many common issues to all sites and no single site has a monopoly on good ideas.

In an effort to help Directors of REU programs to better communicate with each other, the Chemistry REU Leadership Group (LG) organized the first Pan-REU workshop at NSF headquarters in late September. Directors from some 60 REU sites gathered to discuss best practices, consider the impact of the program at the

National level and to discuss ways that the program as a whole might be improved. The participating directors were chosen to represent the great diversity of REU sites across all participating disciplines.

Susan H. Russell of SRI International presented the plenary lecture discussing the results of studies on the impact of undergraduate research on the students who participate. As most readers of the *LG Report* would expect, a research experience encourages students of all races and genders to pursue advanced degrees. While undergraduate research is a largely positive experience across the board, it

(Continued on page 3)

## LG Events Planned for Atlanta

Several exciting LG events are being planned for the Spring ACS meeting in Atlanta. These include a series of symposia in the Chemical Education Division, a workshop to help REU Directors to develop partnerships with LSAMP sites and travel awards for undergraduate researchers.

Three symposia that will be of interest to REU site directors are planned for Atlanta.

These are being organized by Tom Wenzel (Bates College) and LG member Marya Lieberman (Notre Dame). The first is entitled “Creating Programs to Support Intensive Undergraduate Research”. The speakers will offer historical and practical insights into what it takes to initiate and run successful REU programs as well as institution-wide UROP/SURF/URP programs.

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## “Cybersize It”



*Photograph by Megan  
Bean, Mississippi State  
University*

The fall meeting of the LG was held September 22-26 at the NSF headquarters in Arlington, VA. The group met with NSF Director Art Ellis to discuss the state of the NSF, new initiatives and the Foundations priorities. Dr. Ellis told the group that NSF needs to maximize the impact of the dollars it invests in research. One way to do that is to make better use of technology. NSF is very interested in projects that include a significant “cyber” component. Such proposals will receive favorable attention and may qualify for supplemental funding. See <http://www.nsf.gov/chem/cyber> for details.

Of course, other NSF priorities remain. These include a commitment to “inclusivity”. This means more than racial and ethnic diversity, but also geographic inclusion. NSF is committed to addressing the needs of society members of all ages and educational levels. In addition, NSF continues to hold workshops and to promote interdisciplinary activities and on issues of sustainability. The broader impacts mandate is also an important aspect of all NSF proposals. At the fall ACS meeting, the NSF held a workshop on this topic. More details are available at: <http://chemistry.clemson.edu/NSF-broaderimpactsposters/>

## Funding for REU Remains Tight

This year was a difficult one for the Chemistry REU program. A combination of a tight budget at NSF, ongoing REU commitments, and a large number of grants coming up for renewal resulted in a very low funding rate. Initially, only 14 sites received funding. With co-funding from other units within NSF, an additional 4 sites were eventually supported. This is a major decrease from a few years ago, when as many as 25 sites were funded in a given year.

Richard Foust, Program Officer for the Chemistry REU program noted that there were a number of excellent proposals that

were recommended for support, but that NSF was forced to decline due to insufficient funds. This includes the denial of renewal proposals for some long-running and highly successful sites.

Next year doesn't look much better. Many of the proposals that were narrowly declined last year have been resubmitted. In addition, many other sites come up for renewal this year. With more than 90 proposals received at NSF and expectations for a flat funding cycle, the success rates of Chemistry REU proposals will likely sink to 20% or less.

## The LG Urges Increased REU Funding

In a meeting with NSF Chemistry Division Director Art Ellis, the LG expressed dismay at proposal success rate within the REU program. The LG pointed out that this funding rate is below the NSF average and is hitting the REU Community hard as experienced site directors at historically strong programs are losing funding. Likewise, potentially significant new sites are being discouraged from joining the

program and the total number of slots for students (already well below the level of demand) is declining. The group argued that during a time when graduate schools are experiencing sharp declines in foreign applicants, it is counterproductive to cut back on a program that has a proven record of successfully encouraging domestic students to seek advanced degrees. Further,

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*Stories from the  
fall LG meeting  
in Arlington*

## **Atlanta (from page 1)**

“Designing a Research-supportive Undergraduate Curriculum” is the topic of a second symposium. Speakers will present examples of departmental curricular designs specifically developed to promote research and research-like activities. The third symposia, “Conducting Research at a Predominantly Undergraduate Institution: Faculty Strategies for Success”, will feature faculty members from a variety institutional types and career stages. They will provide tips and insights from their own experiences on how to successfully integrate research and the teaching responsibilities at various types of institutions.

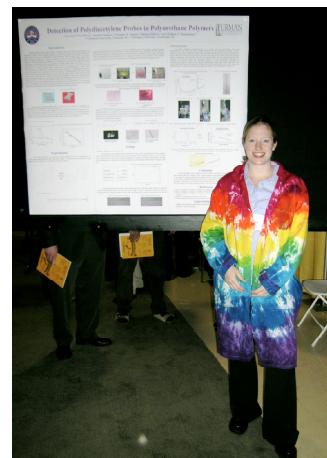
In a second initiative, the LG is making an effort to develop activities that will enhance collaboration between REU sites and the Louis Stokes Alliance for Minority Participation (LSAMP) program (see article about the LSAMP program on page four of this newsletter). In Atlanta, the LG will be holding a workshop entitled "Synergy

Between the REU and LSAMP Programs; Establishing Partnerships to Create Research Opportunities for Underrepresented Minority Participants" All REU site Directors are encouraged to attend a reception Monday evening for a chance to meet LSAMP chemists and site directors. This is an excellent opportunity to expand minority participation in your REU program. Contact Mary Boyd (mboyd@georgiasouther.edu) for more information.

Finally, the LG will again be providing travel support for REU and LSAMP students to attend the Atlanta meeting. Students must be listed as presenters of a talk or poster in order to be eligible. Application forms may be found at:

[http://www.wellesley.edu/Chemistry/David/Award\\_application\\_2006.xls](http://www.wellesley.edu/Chemistry/David/Award_application_2006.xls)

The application should be sent by Email to [dhaines@wellesley.edu](mailto:dhaines@wellesley.edu).



## **Workshop (from page 1)**

does not generally result in increased numbers of students coming into STEM disciplines. Interest in the technical disciplines must begin at an earlier age.

Randy Duran, Chair of the LG and a workshop co-organizer called the event a “great success”. “We had excellent participation not only by REU site directors, but also by representatives of funding agencies, governmental officials and the press.” Organizer Mary Boyd noted that the workshop will result in concrete action. “Several sub-committees have been formed to act on the key recommendations coming out of the workshop.”

A detailed report on the workshop is forthcoming. For more information, see the coverage in C&E News: <http://pubs.acs.org/cen/education/83/8343education2.html>



*Participants at the Pan-REU Summit*

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*Over 24,000 people  
graduate from the  
LSAMP program  
annually*



*Photograph by Megan  
Bean, Mississippi State  
University*

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*"NSF, and I  
personally,  
remain  
committed to  
undergraduate  
research"  
- Art Ellis*

## The LSAMP Program

The National Science Foundation's Louis Stokes Alliances for Minority Participation is a multidisciplinary undergraduate program characterized by an organizational structure of multiple institutions working together toward a shared goal. These alliances include partners from two- and four-year degree granting higher education institutions, businesses and industries, national research laboratories and local, state and federal agencies. The overarching aim of the partnerships, to increase significantly the quantity and quality of underrepresented minority students who graduate with a degree in science, technology, engineering and mathematics disciplines, is shared by all partner institutions, laboratories and agencies.

Art Hicks, director of the LSAMP program told the LG that last year, some 24,000 participating students received degrees in STEM fields and that some 1100 of these were in chemistry. Since the inception of the

program in 1991, more than 240,000 students have graduated. More than 50% of these students have gone on to graduate school.

In the most recent phase of the program, the "Bridge to the Doctorate", 18 sites have been selected to encourage students to pursue PhDs in their chosen STEM fields. The sites average 12 students each to provide a "critical mass" of minority students in a given institution. Some 500 students are now participating. They are funded by the NSF for the first two years of their study, while the institutions commit to supporting them for the remaining term of study.

Dr. Hicks noted that these positions are highly competitive and are filled with exceptionally talented students. The retention rate is very high and the program has been highly successful by any measure.

For more information, see:  
[www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5477&org=NSF](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5477&org=NSF)

## Funding (from page 2)

new initiatives within the Chemistry REU program, many originating with the LG, are threatened by declining support. The LG strongly recommended a target of 25 Chemistry REU sites/year.

Dr. Ellis expressed sympathy for the groups' concerns. He emphasized that NSF as a whole, and he personally, remain committed to undergraduate research and to the REU program. "NSF will fund as many proposals recommended by the reviewers as it possibly can", he stated. The NSF budget, however, is under pressure from many interest groups and is not likely to see a large increase during the next fiscal year. Dr. Ellis urged the LG and the REU community to "think boldly" and to help provide him with ammunition to take the program into new territory.

## LSAMP and REU

While the inclusion of minority students is a high priority for NSF, many REU site directors complain that it is difficult to recruit such students. The LG has met with Dr. Hicks to discuss this issue and to work to develop a partnership with the LSAMP program. As part of this important ongoing effort, Chemistry REU Site Directors, LSAMP faculty and other interested parties are invited to the ACS National meeting in Atlanta this spring. "The Atlanta events offer unique opportunities for chemists in the two communities to gather and discuss mutually beneficial strategies to enhance both programs," says Mary Boyd, LG member and event organizer. "This is a chance to build collaborations that can change lives." For more information, see the article on page one of this newsletter.

## The LG Report

A PUBLICATION OF  
THE CHEMISTRY REU  
LEADERSHIP GROUP

**Editor:** Timothy Hanks

The LG Report may be distributed freely in its entirety. The opinions expressed in the LG Report are those of the Chemistry Leadership Group and do not necessarily represent those of the National Science Foundation. All articles, unless otherwise noted, were written by Timothy Hanks, who accepts responsibility for their content.



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## REU Online Posters

Art Ellis said to “cyber size it” and the LG has stepped up to the plate. Working with the Colorado State University library, the LG has worked to develop a web presence where the entire Chemistry REU program can show off its remarkable achievements. The REU Online Poster Repository moved from the testing phase to the operational phase this fall and is accepting submissions from all chemistry REU sites.

Organized by LG member, Graham Peaslee, and former LG member, Nancy Levinger, (Colorado State), the site is both user-friendly and sensitive to intellectual property concerns. “We wanted a site that is both easy to use and contained safeguards against inadvertent release of sensitive information,” says Peaslee, “So far, feedback from the Site Directors has been very positive.”

### *About the Chemistry Leadership Group...*

The Chemistry REU Leadership Group is composed of REU Site Directors and is supported by a special grant from the NSF. Its mission is to improve the REU program through workshops, travel grants, symposia, and other innovative activities. Members are elected to three-year terms by the current LG and are chosen to represent the broad diversity of Chemistry REU sites. If you are interested in serving on the LG, you are encouraged to contact the Chair and to participate in LG activities.

Richard Foust, Director of the Chemistry REU program at NSF is enthusiastic about the Online Poster Site. “It has a major impact when a Senator or Congressman can go to a web site and see the work being done by a student from his or her district.”

Of course, the project is not solely aimed at Washington. The posters can help to advertise an REU site to potential applicants, local newspapers, faculty at other institutions and college administrators. “REU students are doing great work,” says Professor Peaslee, “it’s in everybody’s interest to have these results presented to society.”

Have your 2005 participants put up their posters yet? There is still time. See:

<http://vulture.library.colostate.edu/nsf/indexample.php>

The LG is (front row, L to R): Richard Foust (NSF Program Officer and Advisor to the LG); Marya Lieberman, University of Notre Dame; Mary Boyd, Georgia Southern University (Past Chair); Gloria Thomas, Mississippi State University; Timothy Hanks Furman University (Secretary); (back row, L to R): Leonard Fine, Columbia University; Graham Peaslee, Hope College (Chair Elect); Scott Nickolaisen, University of Southern California; David Haines, Wellesley College; Randy Duran, University of Florida (Chair);

