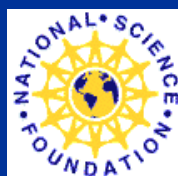


Workshop on Excellence Empowered by a Diverse Academic Workforce: Achieving Racial & Ethnic Equity in Chemistry



September 24-26, 2007

Isiah Warner at
NDEW 2011/OXIDE

Workshop Organizers

CO-CHAIRS

Nicholas Turro, Columbia University

Isiah Warner, Louisiana State University

STEERING COMMITTEE

Mary Barkley, Case Western Reserve University

Sheila Browne, Mount Holyoke College

Larry Dalton, University of Washington

Billy Joe Evans, University of Michigan

Carlos Gutierrez, California State University, Los Angeles

Rigoberto Hernandez, Georgia Institute of Technology

James W. Mitchell, Howard University

Sharon Neal, University of Delaware

Geri Richmond, University of Oregon

FEDERAL ADVISORY COMMITTEE

Linda Blevins, Department of Energy

Luis Echegoyen, National Science Foundation

Miles Fabian, National Institutes of Health

Joe Martinez, Department of Energy

Tyrone Mitchell, National Science Foundation

Cliff Poodry, National Institutes of Health

Michael Rogers, National Institutes of Health

Celeste Rohlffing, National Science Foundation

Eric Rohlffing, Department of Energy

Khaleelah Po Rome, National Science Foundation

Isiah Warner at
NDEW 2011/**OXIDE**

CO-CHAIRS



Nicholas Turro
Columbia University



Isiah Warner
Louisiana State University

STEERING COMMITTEE



Mary Barkley
Case Western Reserve
University



Sheila Browne
Mount Holyoke College



Larry Dalton
University of Washington



Billy Joe Evans
University of Michigan



Carlos Gutierrez
California State University,
Los Angeles



Rig Hernandez
Georgia Institute of
Technology



James W. Mitchell
Howard University



Sharon Neal
University of Delaware



Geri Richmond
University of Oregon

Departments that attended the URM Workshop:

1. University of California at Berkeley: Department of Chemistry
2. University of Texas at Austin: Dept. of Chemistry and Biochemistry
3. University of California at Los Angeles: Dept. of Chemistry and Biochemistry
4. University of Florida: Dept. of Chemistry
5. Harvard University: Dept. of Chemistry and Chemical Biology
6. Texas A&M University: Dept. of Chemistry
7. Cornell University: Chemistry and Chemical Biology
8. Texas A&M University: Dept. of Chemistry
9. University of Illinois at Urbana-Champaign: Dept. of Chemistry
10. Massachusetts Institute of Technology: Chemistry Department
11. Stanford University: Chemistry Department
12. California Institute of Technology: Division of Chemistry and Chemical Engineering
13. Pennsylvania State University: Department of Chemistry

14. University of California at San Diego: Dept. of Chemistry and Biochemistry
15. University of Wisconsin-Madison: Dept. of Chemistry
16. University of North Carolina at Chapel Hill: Dept. of Chemistry
17. University of Colorado-Boulder: Dept. of Chemistry and Biochemistry
18. University of Michigan – Ann Arbor: Dept. of Chemistry
19. Ohio State University: Dept. of Chemistry
20. University of Puerto Rico – Rio Piedras Campus: Dept. of Chemistry
21. Northwestern University: Dept. of Chemistry
22. Indiana University: Dept. of Chemistry
23. Georgia Institute of Technology: Chemistry and Biochemistry
24. Florida State University: Dept. of Chemistry
25. Michigan State University: Dept. of Chemistry
26. University of Maryland – College Park: Dept. of Chemistry and Biochemistry
27. University of New Mexico: Dept. of Chemistry and Chemical Biology
28. University of Oklahoma: Dept. of Chemistry and Biochemistry
29. University of California – San Francisco: Dept. of Chemistry

30. University of Massachusetts – Amherst: Dept. of Chemistry
31. Rutgers – New Brunswick: Dept. of Chemistry
32. Oklahoma State University: Dept. of Chemistry
33. Oregon State University: Dept. of Chemistry
34. Purdue University: Dept. of Chemistry
35. University of Chicago: Dept. of Chemistry
36. University of Minnesota: Dept. of Chemistry
37. University of Pennsylvania: Dept. of Chemistry
38. University of Puerto Rico – Mayaguez: Dept. of Chemistry
39. University of Southern California: Dept. of Chemistry
40. Princeton University: Dept. of Chemistry
41. University of Alaska – Fairbanks: Dept. of Chemistry and Biochemistry
42. Yale University: Dept. of Chemistry
43. University of Pittsburgh: Dept. of Chemistry
44. SUNY – Stony Brook: Dept. of Chemistry
45. Arizona State University: Dept. of Chemistry and Biochemistry
46. University of California at Irvine: Dept. of Chemistry

Luis Echegoyen of the National Science Foundation

...the primary target of this effort is to increase the numbers of URM who successfully make the transition from the Ph.D. and post-doctoral level to the professoriate.



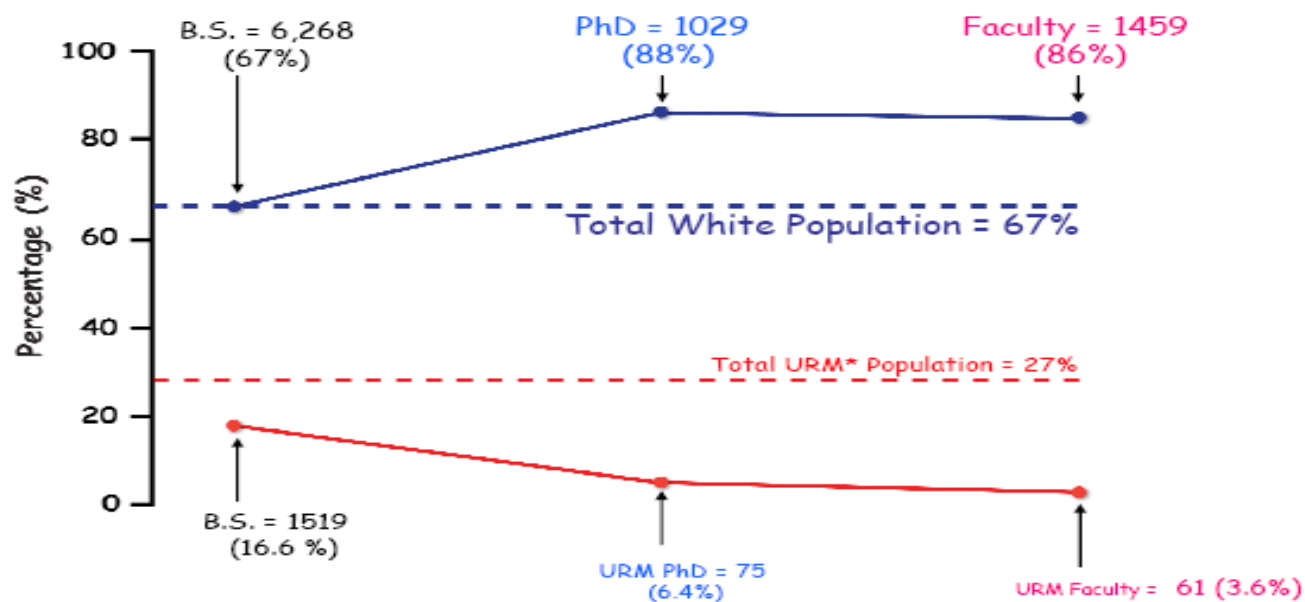
Isiah Warner at
NDEW 2011/OXIDE

Major Topics Covered in Workshop

- Recognition of the existence and effects of implicit bias
- Creation of an appropriate working climate
- Design of strategies for effective recruiting and retention
- Effective mentoring and empowerment
- Diversity as a planned event

Of 124 black Ph.D.s only 4 will be recruited to the top 32 universities and of 224 Hispanics, only 10 will be recruited to the top 32 universities

FROM B.S. TO FACULTY: THE PIPELINE FOR U.S. CITIZEN ETHNIC GROUP REPRESENTATION IN CHEMISTRY in 2003



Bottom Line!

Our nation needs to take advantage of the excellence inherent in the growing percentage of URM in order to maintain a sufficient supply of domestic Ph.D.s.

Summary of the Problem

- Ph.D. production is flat in all groups, but Ph.D.s from U.S. citizens and permanent residents have dropped considerably over the last decade.
- The number of URM faculty is tiny compared to white faculty.
- Relative to the percentage of their population, few URM Ph.D.s and postdocs are being produced.
- Even worse, an even smaller percentage of the URM Ph.D.s and postdocs are recruited by the top universities.
- In the coming decades, the dominant pool of potential scientists and engineers will shift from the white community to URM.



Implicit Bias!

- A father and his son were in a terrible car accident.
- The man was killed and the son was taken to a hospital emergency room in need of immediate surgery.
- A surgeon walked into the emergency room, saw the boy and said, “I can’t operate on this young man – he’s my son!”
- How can this be?

Consequences of Implicit Bias

- subjective evaluation
- unproductive work environments and unwelcoming climates

Sylvia Hurtado of UCLA: Common Mindsets on Diversity

- **The zero sum game.** Diversity and excellence are competing concepts; one has to forgo one in order to attain the other.
- **Survival of the fittest.** Our courses have to differentiate between those who have the talent for science and those who do not.
- **Diversity is not my responsibility.** I teach science. What does diversity have to do with my work?

Summary of Findings

- Implicit bias is a subtle factor pervasive in all our interactions that undermines the progress of URM candidates at all levels of the pipeline from B.S. to faculty.
- The statistics on URM in chemistry are unacceptable; yet have changed very little in over a decade.
- Mentoring of URM students, postdocs and faculty has not been effective and needs the attention of research sponsors and department heads.
- A network for identifying excellent URM students, postdocs and faculty does not exist and needs to be established...
- The academic climate for URM has been largely unsupportive, indifferent, or in some cases even hostile...
- The overall chemistry community needs to commit to changes

Positive Actions!

- Recognition of the existence and effects of **implicit bias**
- An appropriate working **climate**
- Strategies for effective **recruiting** and **retention**
- **Mentoring** and **empowerment of Diversity** as a planned event through courses of actions accessible to the Chairs of chemistry departments

Recommendations!

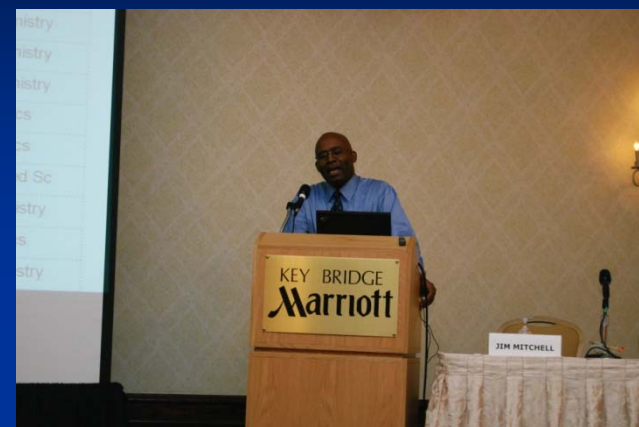
- See URM Report.

- <http://chemchairs.uoregon.edu>

Gender and Diversity Workshops Impact!!!

- January 9, 2008
- Harvard Establishes Postdoc Program for Underrepresented Groups
- Harvard University will award 12 new postdoctoral fellowships in chemistry this spring that are particularly aimed at women and members of ethnic minority groups. The fellows will study for a year in Harvard's department of chemistry and chemical biology, and will have the opportunity to apply for a second year of fellowship money.
- MIT Materials Program

Collage of attendees!



Racial and Ethnic Diversity Workshop

Barriers that slow the progress of (URM) Faculty
% Rated as moderate to very important

CHEM
Chairs
Pre

Subtle biases against URM faculty that accumulate over the years	70 %
URM getting heavier service responsibilities relative to majority colleagues	74 %
URM having less opportunities to be mentored by top chemists	35 %
Departmental climate not supportive of URM faculty	45 %
URM difficulty in competing for the best graduate students	21 %
Racial-ethnic discrimination in the peer review process of papers and grants	21 %
URM being excluded from important departmental and institutional decisions	16 %

Scale: not an issue, not important, somewhat important, moderately important, very important



What effect did the Racial and Ethnic Diversity workshop have on Chemistry Chairs?

Barriers that slow the progress of (URM) Faculty % Rated as moderate to very important	CHEM Chairs Pre	CHEM Chairs Post
Subtle biases against URM faculty that accumulate over the years	70	100
URM getting heavier service responsibilities relative to majority colleagues	73	84
URM having less opportunities to be mentored by top chemists	35	68
Departmental climate not supportive of URM faculty	45	61
URM difficulty in competing for the best graduate students	21	58
Racial-ethnic discrimination in the peer review process of papers and grants	21	37
URM being excluded from important departmental and institutional decisions	16	26

Support for Symposium

- National Science Foundation
- Department of Energy
- National Institutes of Health