Race Matters: Building the 21st Century Clinician, Educator and Scientist

Angela Byars-Winston, PhD
Associate Professor
Department of Medicine, School of Medicine & Public Health
University of Wisconsin-Madison

Presentation to the Department of Medicine Grand Rounds
UC San Francisco
January 14, 2016

FINANCIAL DISCLOSURE: None; any CME statements to include?

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Learning Objectives

- Learn what does the world outside have to do with the world of science, biomedical research and healthcare
- Understand what discussions of race have to do with mentoring and training the next generation of health professionals

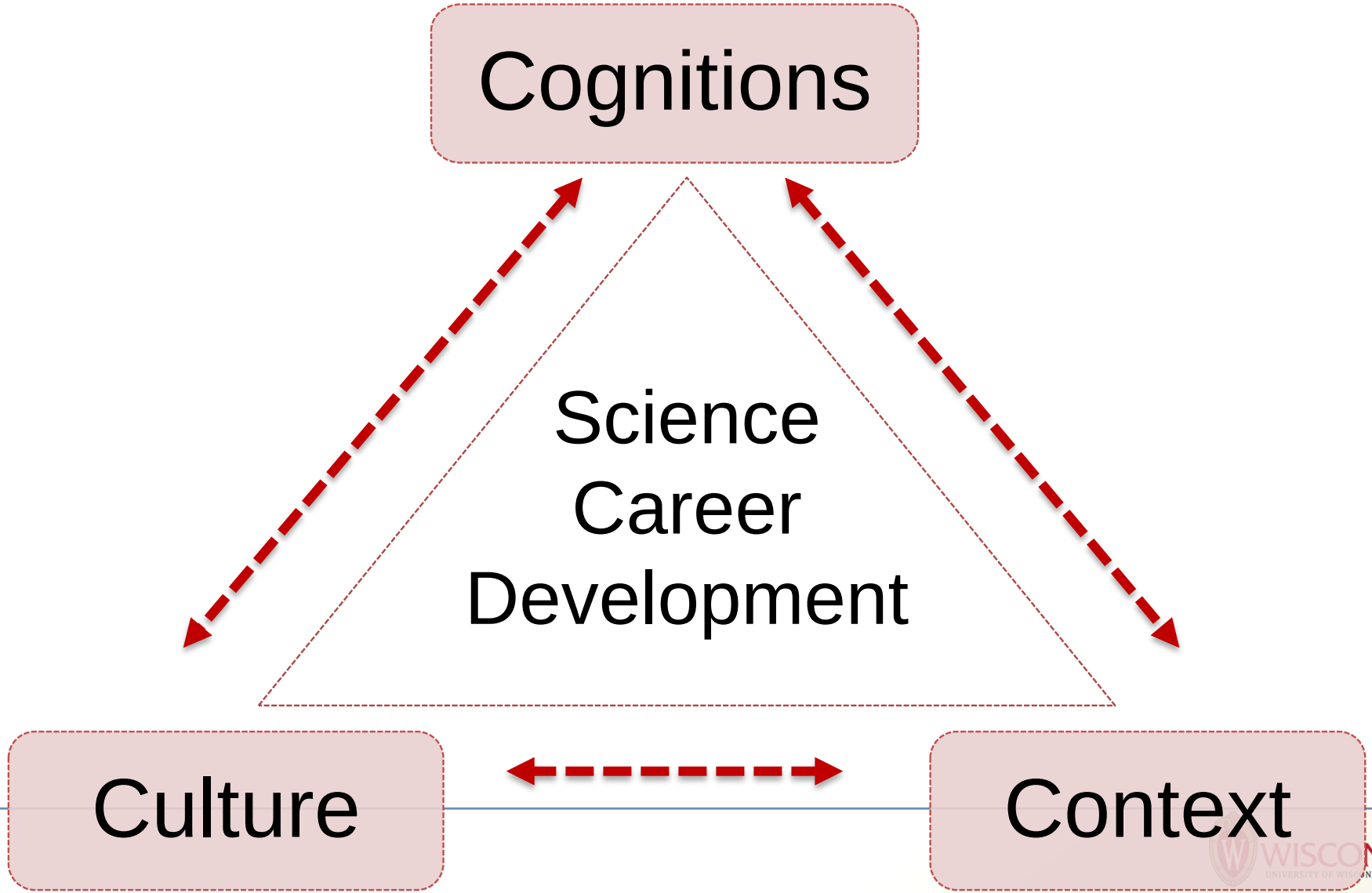
Primary Research Interests

- How do people come to choose work or how does work choose them?
- What difference does “difference” make in human behavior?

What is needed to grow the next generation of scientists?

What is needed to mentor the next generation of scientists, educators, clinicians?

Byars-Winston et al. (2005; 2006; 2010)



Career issues for new investigators from underrepresented racial/ethnic groups

(1) Inadequate research infrastructure, training, and development

(2) Barriers to development as independent researchers

(3) Inadequate and insufficient culturally relevant mentoring

(4) Insensitivity, misperceptions, and miscommunications

(5) Family members lack of understanding of academic and career demands

(6) Navigating institutional & disciplinary culture & landmines

(e.g., Forsyth & Stoff, 2009; Shavers et al. 2005; Sopher et al., 2015; Walters & Simoni, 2009)

Some Barriers to Success in Academy for AIAN Investigators

- Marginalization of research interests
- Apartheid within academia, mentoring
- Microaggressions:
  - microinsults (e.g., eye-rolling when an AIAN faculty member brings up issues related to AIAN communities)
  - microinvalidations (e.g., rendering AIAN people invisible by omitting American Indians/Alaska Natives as an underrepresented group)
  - microassaults (e.g., making racist comments and “jokes” directly to AIAN faculty)

(Walters & Simoni, 2009)

Cultural Diversity Factors

- Gender, race, and ethnicity relate to how mentees perceive their mentored research experience, what they value in a research mentor, and their self-perceptions (Byars-Winston et al., 2010; Blake-Beard et al., 2011; Carlone & Johnson, 2007; Hurtado et al., 2009; Ishiyama, 2007; Johnson et al., 2011; Laursen et al., 2010)
- STEM disciplines often presented as neutral to cultural diversity factors

NIH's Call To Address the Science of Diversity (Valantine & Collins, 2015)

- Evidence-based approaches to recruitment, training, and persistence in biomedical research
- Identify psychological and social factors that mitigate individual and institutional barriers to workforce diversity

Subjecting Mentoring to Scientific Inquiry

Bearman et al. (2007) asserted,

- "If studying mentoring is a scientific enterprise, then determining its mechanisms is what allows us to develop mentoring technology" (p. 385)…

- And facilitate development of systematic research mentor training interventions (Byars-Winston & Pfund, 2009)
- Virtually no research directly addresses the issue of training in mentorship (Campbell, 2007)
- And little research exists quantifying impact of cultural diversity in research mentoring relationships

R01 Study: What Matters in Mentoring? (2009-2013)

NIH/NIGMS, Grant #GM094573

Leadership Team

- **Angela Byars-Winston,** Counseling Psychologist; Assoc. Prof of Medicine, CWHR

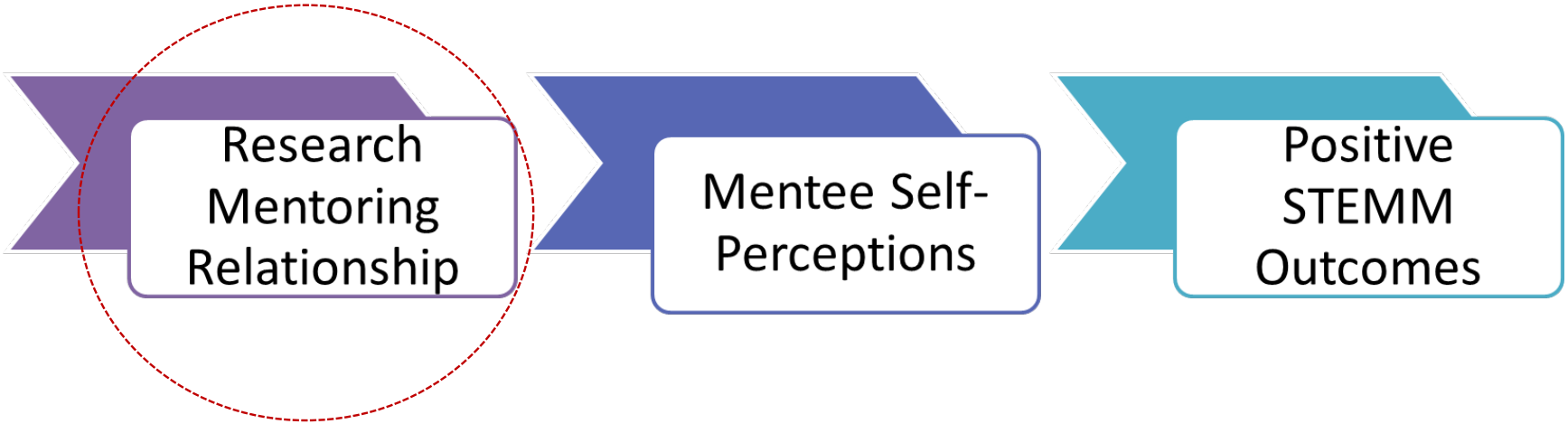
- **Christine Pfund,** Cell and molecular biologist; Researcher, Wisconsin Center for Education Research, Department of Medicine, ICTR, CWHR

- **Janet Branchaw,** Physiologist; Asst. Prof of Kinesiology, Director of Undergrad Research Programs and Director of Wisconsin Institute for Science Education and Community Engagement

- **Patrice Leverett,** Doctoral Student in School Psychology, R25/IMSD - Science Scholar

What Matters in Mentoring?

(Byars-Winston et al., 2015, *Int'l Jrnl of Sci Ed*)



- "*My mentor showed interest in my research project*"
- *"My mentor appreciated my contributions"*
- *"My mentor made me feel included in the lab"*

NIH/NIGMS, R01 Grant #GM094573

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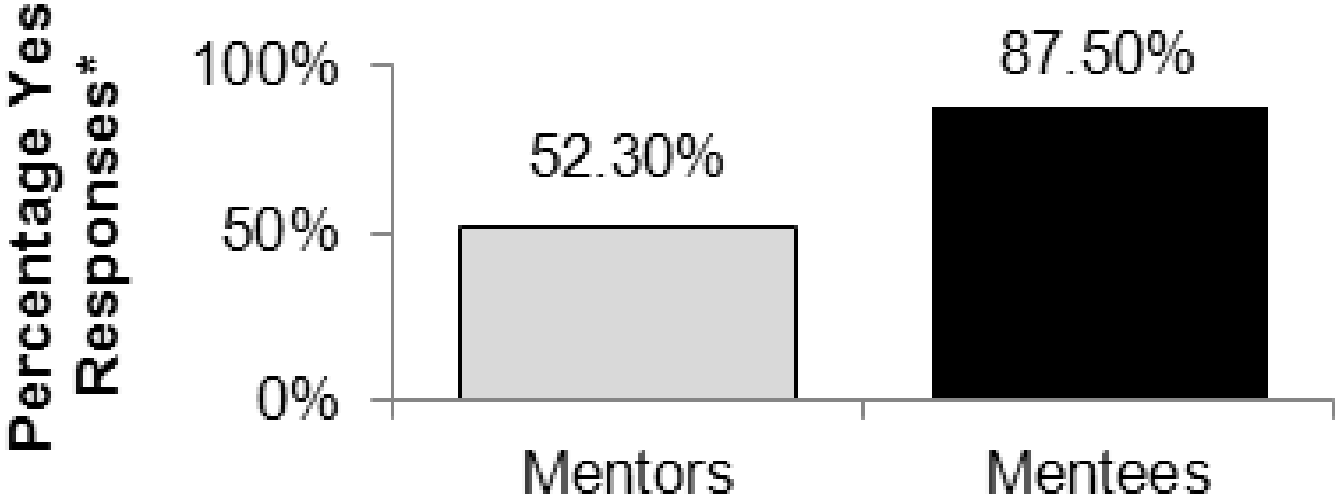
Mentor and Mentee Views on Cultural Diversity in Research Mentoring Relationships



Should you address cultural diversity directly in the mentoring relationship?

** Results compare Yes responses with those responding No or not indicating an opinion.*

Leaning In to Cultural Diversity

- What factors facilitate mentors and trainees *leaning in* to cultural diversity matters in the research mentoring relationship?

- What interventions are effective in developing culturally responsive mentoring relationships?

Culturally Responsive Mentoring (Byars-Winston, 2014)

Acknowledges personal cultural identity and worldviews; affirms and acknowledges trainees' culture (heritage, worldview), responds to (instead of avoiding, downplaying, or dismissing) cultural diversity, and uses cultural data as a resource to effectively mentor

Mentor: Awareness and skills to engage in interactions, mentoring, communications in culturally-responsive (competent) ways

Mentee (especially URMs): Cultural resilience and navigational skills training (CRANS Training)

Focus in R01 Renewal (2014-2018)

- How do mentors and mentees in the biological sciences conceptualize and understand demographic cultural diversity? Its relevance to the mentoring relationship?
- Does an intervention to raise mentors' cultural diversity awareness improve their mentees' rating of mentoring effectiveness?
- Is there a difference in mentors' efficacy to engage in culturally responsive mentoring pre and post a cultural diversity awareness intervention?

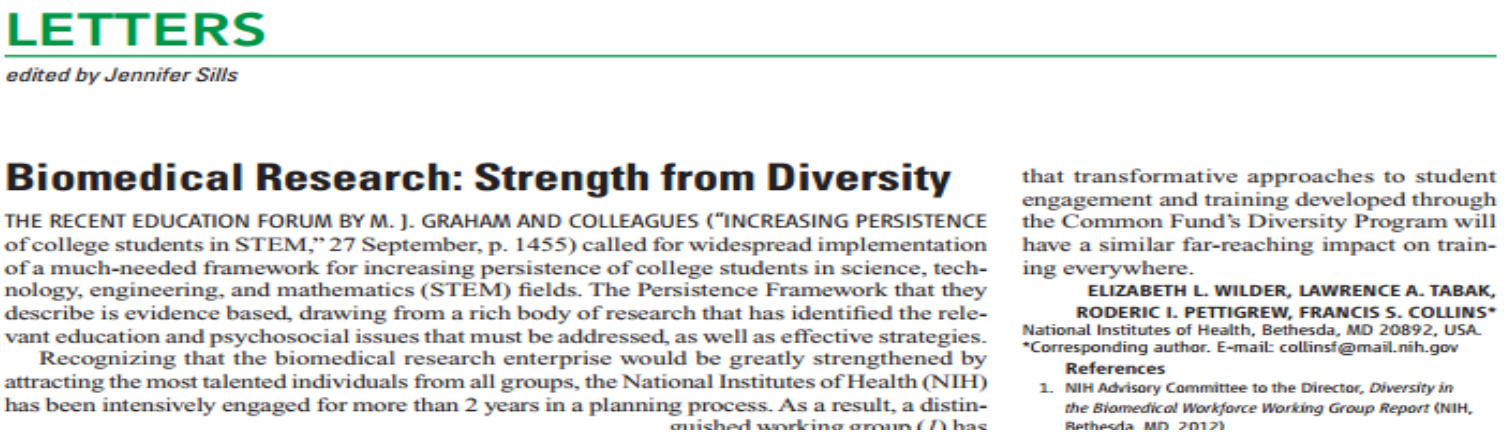
BUILDING THE 21ST CENTURY CLINICIAN, SCIENTIST, EDUCATOR

Requires building a cadre of mentors to facilitate their development in culturally responsive ways

Programmatic Initiative

NIH Diversity Consortium Program to advance effective research mentoring with culturally diverse groups and across career stages

National Research Mentoring Network (NRMN; NRMN.net)



LETTERS

edited by Jennifer Sills

Biomedical Research: Strength from Diversity

THE RECENT EDUCATION FORUM BY M. J. GRAHAM AND COLLEAGUES ("INCREASING PERSISTENCE of college students in STEM," 27 September, p. 1455) called for widespread implementation of a much-needed framework for increasing persistence of college students in science, technology, engineering, and mathematics (STEM) fields. The Persistence Framework that they describe is evidence based, drawing from a rich body of research that has identified the relevant education and psychosocial issues that must be addressed, as well as effective strategies.

Recognizing that the biomedical research enterprise would be greatly strengthened by attracting the most talented individuals from all groups, the National Institutes of Health (NIH) has been intensively engaged for more than 2 years in a planning process. As a result, a distinguished working group (1) has

that transformative approaches to student engagement and training developed through the Common Fund's Diversity Program will have a similar far-reaching impact on training everywhere.

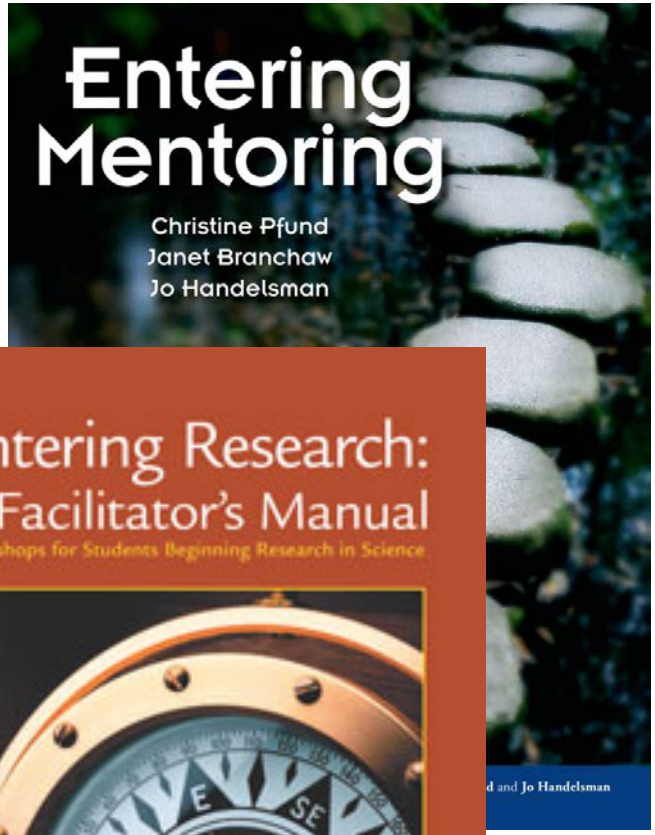
ELIZABETH L. WILDER, LAWRENCE A. TABAK, RODERIC I. PETTIGREW, FRANCIS S. COLLINS*
National Institutes of Health, Bethesda, MD 20892, USA.
*Corresponding author. E-mail: collinsf@mail.nih.gov

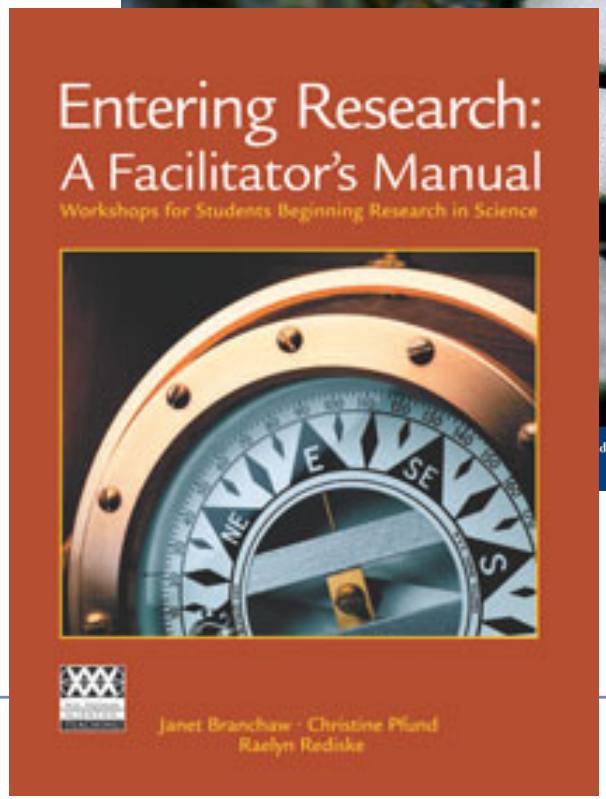
References

1. NIH Advisory Committee to the Director, *Diversity in the Biomedical Workforce Working Group Report* (NIH, Bethesda, MD, 2012)

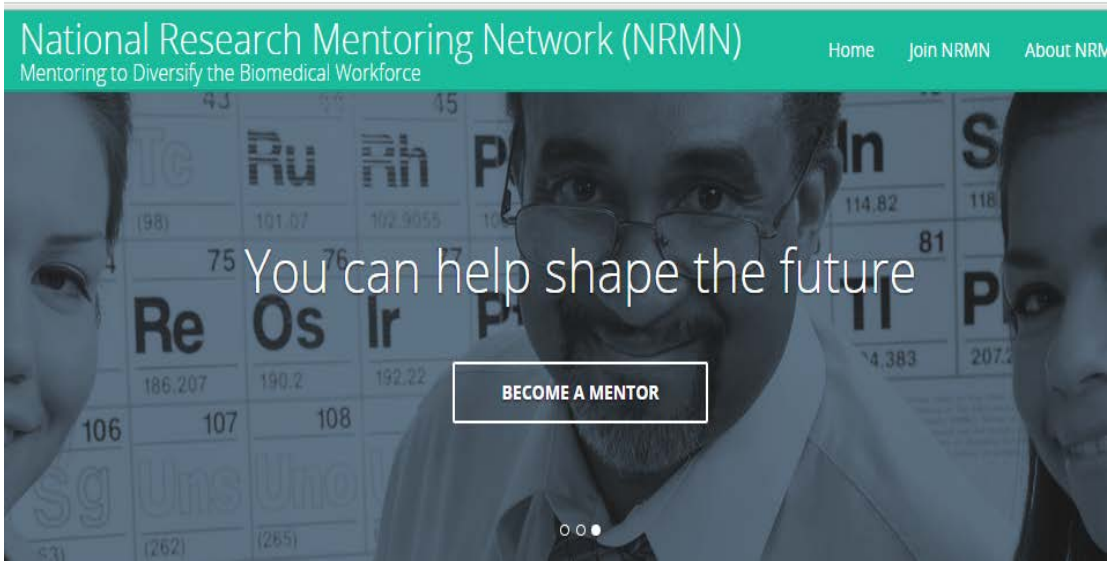
Implications

Training for Mentors/Mentees





National Research Mentoring Network



Our country's changing demographics make it imperative that new interventions take place to keep America competitive in biomedical and behavioral sciences. Mentoring will help us meet the challenge.

www.researchmentortraining.org/

www.nrmnet.net

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Conclusion

In building the 21st century professional, mentors should consider:

- Cultivating Cultural Responsiveness
- Increasing Self-Reflexivity
- Receiving TRAINING to increase their cultural awareness and mentoring effectiveness

Thank you

AMBWINST@MEDICINE.WISC.EDU