MS PHD’S–GEO REU:

Promoting retention, inclusivity and meaningful engagement in the geosciences for URM participants of NSF REU programs

Lois Ricciardi, Ashanti Johnson, Vivian Williamson Whitney, Warner Ithier-Guzman, LaTanya Braxton
MS PHD’S–GEO REU

2014
• Piloted in conjunction with AGU Fall Meeting
• Modeled after MS PHD’S
• One cohort of 10 students
• Single phase of activities
  – Professional Development
  – Mentoring
  – Community building

2015
• Two Phases of Activities
  – Face-to-face
  – Virtual
• Designed using 2014 outcomes
• 3 cohorts
  • 15 students per year
  • 3 near-peer mentors per year
Overview: MS PHD’s

Three Phases

Face-to-Face and Virtual

- Tiered Mentoring
- Successful URM Scientist Role Models
- Community Building
- Professional Development Training
- Networking Opportunities
- Virtual Community
MS PHD’S-GEO REU Activities

Two Phases

Face-to-Face and Virtual

- Professional Development
- Mentoring
- Community Building

- Face-to Face
  - Phase I: AGU Fall Meeting
  - Phase II: Discipline Specific Meetings

- Organizational Partners
  - AGU
  - AGI
  - AMS
  - ASLO
  - COL
  - ESA
  - Ivy League Symposium
  - GSA
  - NABG
  - NAGT-On The Cutting Edge
  - SFS
  - Sigma Xi
  - SREB-Institute on Teaching and Mentoring

- Virtual Activities
  - Phase I: Virtual Community
  - Phase II: Webinars
    - Funding Your Graduate Education
    - Building Your Mentor Network
    - Finding and Applying to Opportunities
    - Geoscience Career Paths in Academia, Industry and Federal Government
Professional Development

- Creation of Public Web Profile
- Self-Introduction Presentations
- Short, Mid and Long-Term Career Planning
- Curriculum Vitae Development
- Oral and Written Presentation Skills
Mentoring

- **Program Mentors**
  - Successful URM scientist role models
  - Engage with mentees in all program activities

- **Meeting Mentors**
  - Successful URM and non-URM scientist role models
  - Facilitate networking and professional development at scientific meetings and workshops

- **Dream Team**
  - Near-peer mentoring
  - Leadership training

- **Staff**
  - Coordinate program opportunities
  - Support professional and academic development
Community Building

- Community Engagement
  - Peer Contact
  - Mentor Contact
  - Community Support

- Field Trips
  - California Academy of Sciences
  - Aquarium of the Bay

- Multicultural Food Festival

- Men and Women’s Discussion Groups
Virtual Community

The virtual community is used to share successes, disseminate opportunities, provide ongoing mentoring and support, and maintain continuity of networks formed through the program.

- Online profiles
- Webinars
- Listserv
- Facebook
- LinkedIn
- Web video conferencing
- VoIP technologies
Outcomes

Participants become members of the established MS PHD’S professional community

- 223 participants
  - 58 Doctorate
  - 21 Masters
  - 16 Baccalaureate
- Remaining 128 enrolled in undergraduate and graduate programs throughout the U.S.
- Geographic representation
  - 35 states
  - District of Columbia
  - Puerto Rico
  - Two international postdoctoral appointments
    - Saudi Arabia
    - France
Acknowledgements: This material is based upon work supported by the National Science Foundation (NSF) Geoscience Directorate Grants 1540731, 1540726, 1014125, 0429048, 0503536, and 1139269, co-sponsored by the National Aeronautics and Space Administration (NASA) Headquarters Office of Earth Science Grant NAG5-12647. Additional support was provided by the following MS PHD'S Organizational Partners: American Geophysical Union, American Geosciences Institute, American Meteorological Society, Association for the Sciences of Limnology and Oceanography, Aquarium of the Bay, California Academy of Sciences, Consortium for Ocean Leadership (formerly Joint Oceanographic Institutions), Digital Library for Earth System Education, Ecological Society of America, Geological Society of America, Joint Global Ocean Flux Study program, National Association of Black Geoscientists, National Oceanic and Atmospheric Association, Ocean Carbon and Biogeochemistry program, On the Cutting Edge Professional Development for Geoscience Faculty program, Sigma Xi, Society for Freshwater Science, the Oceanography Society, the University of Texas at Arlington, and the Institute for Broadening Participation.
Thank You!

Questions?