NM-PAID: Partnering for Diversity at New Mexico Institutions of Higher Learning and Research

- New Mexico State University (NMSU)
  - PI, Dr. Tracy Sterling, Weed Physiology
  - Co-PI, Dr. Tara Gray, Teaching Academy
- University of New Mexico (UNM)
  - Co-PI, Dr. Alejandro Aceves, Mathematics & Statistics
- New Mexico Institute of Mining and Technology (NMT)
  - Co-PI, Dr. Tanja Pietraß, Chemistry
- Los Alamos National Laboratory (LANL)
  - Co-PI, Dr. Jim Bossert, Earth and Environmental Sciences (EES)
NM-PAID: Partnerships for Adaptation, Implementation and Dissemination
(Alliance for Faculty Diversity)

- Jan. 2007 – Dec 2009
- To disseminate NMSU’s best practices of:
  - Mentoring
  - P&T Training
  - Department Head training
  - Pipeline focus on Post-docs
- To:
  - UNM, NMT, LANL
  - Keeping in mind their unique needs and structures
Institutional Data – Fall 2005

Undergraduate Students

<table>
<thead>
<tr>
<th>Institution</th>
<th>Percent Female</th>
<th>Percent Minority</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMSU</td>
<td>39.1%</td>
<td>48.1%</td>
</tr>
<tr>
<td>UNM</td>
<td>42.7%</td>
<td>48.1%</td>
</tr>
<tr>
<td>NMT</td>
<td>27.0%</td>
<td>24.0%</td>
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</tbody>
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*Data from Office of Institutional Research from each institution*
Institutional Data- Fall 2005

Graduate Students

- **LANL STEM** is EES Department; student numbers represent postdocs
Institutional Data – Fall 2005

Tenured and Tenure-Track Faculty

LANL NMT UNM NMSU

*LANL STEM is EES Department; LANL 'Faculty' represent full-time scientists.
NM-PAID Goals

- Increase knowledge of Diversity Issues and Strategies
  - Mentoring approaches
  - Promotion and tenure issues
  - Leadership training

- Institutionalize sustainable grass roots structure for faculty development training
  - Sustainable grass-roots committees at each institution
    - Supported by upper administration
    - Including women and men
  - Annual Department Head Retreats to promote diversity leaders within the ranks

- Provide a pipeline to STEM careers for diverse students
  - Postdoc and student training
  - Participation in the professoriate
  - NM Alliance for Graduate Education and the Professoriate (AGEP)
NM-PAID Participants:
Co-PIs

- New Mexico State University (NMSU)
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  - Co-PI, Dr. Jim Bossert, Earth and Environmental Sciences (EES)
NM-PAID Participants: Faculty Development Partners

- **UNM: Office of the Provost**
  - Dr. Gary Smith, Special Assistant to the Provost & Professor, Earth and Planetary Sciences

- **NMT: Center for Innovative Teaching and Learning (CITL)**
  - Dr. Scott Zeman, Director of Faculty Development and Associate Professor, History

- **NMSU: Teaching Academy**
  - Dr. Tara Gray, Director and Associate Professor, Criminal Justice
NM-PAID Participants:
STEM Pipeline Partner

- NM-AGEP - New Mexico Alliance for Graduate Education and the Professoriate
  - NM-AGEP is one of ca. 20 NSF programs aimed at increasing the number of minority Ph.D.s (and those who join the professoriate) in STEM
  - Alliance consists of NMSU, NMT and UNM
Dr. Lisa M. Frehill
- Executive Director, Commission on Professionals in Science and Technology
- ADVANCE Program Director (2005-2006), University of California at Irvine
- Founding Program Director and Principal Investigator of ADVANCE: Institutional Transformation award at NMSU
- Associate Professor of Sociology, New Mexico State University
- Ph.D. in Sociology with a minor in systems engineering, University of Arizona
- B.Sc. in Industrial Engineering, General Motors Institute (now Kettering University)
Mentoring as a Key Transformative Strategy at NMSU

- Mentoring encourages the development of social ties
- It doesn’t “look” like a gender-based approach
  - Kanter 1977: warns us to avoid “boundary heightening”

- **Relationships** – nurturing vs. competitive

- Approach at NMSU:

  Multiple Mentoring Model
(1) Connect mentees to mentors who are more central and have denser social networks
(2) On-campus on-going events
Create a larger community of mentors and mentees.
Programmatic Practices

- **Make mentoring normative**
  - Practice: paired ALL new STEM faculty with mentors outside their department, but within College.
  - Invite senior faculty and administrators to participate
  - Incorporated mentoring into leadership development programming

- **Encourage interactions**
  - Practice: pairs complete agreements
  - Practice: facilitated group interactions
    - luncheons, assigned seating, table topics—not always with speaker
    - mixers, dinners, picnics, open houses

- **Training: mentors**
  - Share best practices and hints
  - Increases connections among people with a positive orientation to mentoring
  - Encourage non-hierarchical practices
  - Gender and ethnic equity issues
- 32% of male STEM faculty and 93.2% of all female STEM faculty have participated

- Nearly 100 participants in regular mentoring program and 15 per year in the ADVANCING Leaders leadership mentoring program

- NMSU is expanding to include all Colleges
Mentors/Mentees by gender - NMSU

Gender Distribution of Mentors and Mentees

- **Mentors**
  - Male: 25
  - Female: 20

- **Mentees**
  - Male: 25
  - Female: 30

- **Total**
  - Male: 50
  - Female: 50

Legend:
- **Male**
- **Female**
Intended outcomes of mentoring

- Increased research productivity
  - Publications, presentations, grant applications
  - Students
- Research collaborations
- Lower sense of isolation
- Stronger attachment to community
- Higher job satisfaction
- Increased efficacy in obtaining resources
- Reduced likelihood of leaving
- Career advancement
New Mexico Tech (NMT) approach

- Alliance for Faculty Diversity: diverse committee
  - Administrators, faculty all ranks, gender/ethnicity
  - Advice on pairing, plan events, plans to work on Family-Friendly Policies

- Has targeted all 13 of their Departments
  - 12 STEM, 1 Humanities

- Currently has 18 pairs
  - early-career paired with mid/late-career faculty
  - surveys to mentors/mentees in progress
NMT Gender Distribution of Participants - 2007-08

- Male: 25
- Female: 15
- Total: 40
NMT approach

Events:
- Fall lunch sponsored by VP for Student & University Relations
- Spring mentoring social at Dean’s home
- Shared events with PAID partners:
  - Shared outside speaker across state:
    - Craig Nelson – Pedagogy of ……
  - Distance Delivered event
    - Tara Gray – “Ten Easy Ways to Manage Your Time”

Sustainability
- To create as a standing Faculty Senate committee
University of New Mexico (UNM)

- Alliance for Faculty Diversity Committee
  - Faculty members, gender/ethnicity represented

- Planning approach:
  - Using Mentoring report – Faculty Senate – 2005
    - “Mentoring and Support of Untenured Junior Faculty at UNM”
  - Partnering with ‘Mentor Institute’

- With large size, will tailor programs to individual departments
Los Alamos National Labs (LANL)
Earth & Environmental Sciences Division

- Alliance for Faculty Diversity Committee
  - Group Leaders, Team Leaders, gender/ethnicity representation

- Team mentoring approach:
  - Six research groups (i.e. Departments) with the Earth & Environmental Division (i.e. College)
  - Focus on Post-docs many of whom become research staff
  - Two to three senior research staff will mentor 3-5 postdocs to rotate and learn about four core issues

- Four Core Themes identified:
  - CV writing, networking, grant writing, conversion to staff