ORAU
Value Through Partnerships

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Vice President, University Partnerships
Oak Ridge Associated Universities
Michigan Tech Visit
May 18, 2011
Oak Ridge Associated Universities is a university consortium focused on advancing scientific research and education through partnerships.

Partner with UT-Battelle to expand university collaboration with Oak Ridge National Laboratory.

Federal contractor managing the Oak Ridge Institute for Science and Education for DOE (ORISE).
ORAU University Partnership Agenda is Focused on ORNL Science Agenda

• Leverage partnership with UT-Battelle
  – Help ORNL build mutually beneficial university partnerships
  – Be a strong partner in advancing ORNL’s science agenda—new facilities

• Strengthen university leadership in key science initiatives
  – Primary foci of interest: Neutrons, Computational Science, Climate Change

• Embrace academic institutions that share our goals and objectives as new partner institutions
  – Domestic and international
UPO mission

UPO mission elements:

1) providing catalytic grants and awards,
2) promoting funding opportunities,
3) facilitating relationships, and
4) encouraging increased federal investment in scientific research and education.
UPO award programs

- Ralph E. Powe Junior Faculty Awards
  - 118 Applications, 30 Awards
- HBCU/MEI Faculty Summer Research
- Faculty Travel Awards
  - 7 Awards made (10 proposals)
- Event Sponsorship
  - 8 events co-sponsored (15 proposals)
- University Technology Testing with ORAU programs
  - Conversations, no projects funded
Powe Junior Faculty Award Grants

• Early career faculty – competitive selection
• 30 awards @ $5K ORAU, $5K university match
• Shiliang Wu, 2010 Powe awardee
• Audrey Mayer, 2011 Powe awardee
ORNL/ORAU HBCU/MEI Summer Faculty

• Faculty summer collaboration at ORNL
• Stipend and expenses paid
• Approximately 10 awards each summer
• Two FY 2010 awards to ORAU partner institutions
  – Dr. Dafeng Hui, Tennessee State University
  – Dr. Ju Wang, Virginia State University
Faculty Travel Awards

- Up to $800 to travel to build new collaboration
- Can be travel to ORNL or between ORAU institutions
- Anticipated outcomes and student engagement are important criteria
ORAU Event Grants, 2011

• New program for 2011
  – Up to $4000
• First cycle:
  – Nanotechnology of Infectious Diseases
  – Cybersecurity lectures and Exercise
  – Summer Course on Neutrons in Biology

• Second cycle:
  • Gulf Coast Gravity – May 15-16
  • Coastal Plans Streams – June 13-14
  • Intracellular Region – June 23-24
  • NASLIBS- July 18-20
  • Green High Performance Computing – date TBA
Neutrons in Biology Graduate Course

- Graduate students in Structural Biology hands-on experience in neutron crystallography methods
- June 7-11, 2010
  May 23-27, 2011
- Sponsored by NCSU, ORAU, ORNL, DOE EPSCoR
- 15 participants in 2010
ORAU Support to Universities Beyond UPO

- High Performance Computing awards
  - Six current projects were reviewed in February
  - 2012 program finalized
- Volkswagen Scholars (limited to five TN schools)
- Graduate Student Fair
- Nobel Laureate Medicine (June)
  - 14 awards with ORAU funds
- Nobel Laureate Economics (August)
  - Up to 5 Awards with ORAU funds
ORAU Manages the Oak Ridge Institute for Science and Education (ORISE) for DOE

Our purpose, our value-based strategy . . .

- strengthen America's scientific research and education enterprise to enhance global competitiveness
- build public trust and confidence in the management of worker health and environmental cleanup initiatives
- enhance our nation’s preparedness to respond to emergencies related to terrorist incidents, natural disasters, and health threats
Through These ORISE Programs, ORAU Supports the Missions of DOE

- Science Education Programs
- Scientific and Technical Resource Integration/Peer Review Programs
- Occupational Exposure and Worker Health Programs
- Health Communication and Technical Training Programs
- Independent Environmental Assessment and Verifications Programs
- National Security and Emergency Management Programs
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STRI Reviewers from Universities and Colleges, FY 2010

STRI recruited a total of 2,513 reviewers from 286 institutions worldwide, including 947 reviewers from 80 member universities.

Note: One reviewer was recruited from an ORAU member university located in London, UK.
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Filling the Pipeline of Future Science and Technology Leaders

• ORAU’s contribution:
  – Experience-based programs tailored to measurable outcomes
  – Scholarship, fellowship, internship, postgraduate, postdoc, K-12, and senior scientist programs
  – 7,800 faculty and students annually; 1,000 colleges and universities; $145M sponsored by 14 federal agencies; over 200 research institutions

• Major programs:
  – UT-Battelle/ORNL science education partnership
  – DOE scholarship, fellowship, internship programs
  – NASA postdoctoral associates
  – DHS scholars and fellows program
  – DHHS (FDA, CDC, NIH) undergraduate, graduate, postdoc programs
Filling the Pipeline of Future Science and Technology Leaders – ORAU Touches All Levels

In FY10, ORAU/ORISE Programs Involved more than 7,800 Participants

- Undergraduates: 1581
- Graduate Students: 936
- Recent Graduates (M.S., B.S., 2-year): 1383
- Postdoctoral Fellows: 1320
- College/University Faculty: 340
- K-12 Students: 1459
- K-12 Teachers: 677
- Other Scientists & Professionals: 177
Selected Program Sponsors:
- Centers for Disease Control
- Department of Commerce
- Department of Defense
- Department of Energy
- Department of Homeland Security
- Environmental Protection Agency
- Federal Bureau of Investigation
- Food and Drug Administration
- National Aeronautics and Space Administration
- National Institutes of Health
- National Science Foundation
- Nuclear Regulatory Commission
- Oak Ridge National Laboratory
Detailed Information is Available on Each Program Operated by ORAU

http://see.orau.org
ORAU University Partners Participate in Science Education and Research Programs, FY 2010

- ORAU/ORISE administered programs - $145M total all schools
  - ORAU institutions
    - Fellowship and Scholarship – 157 participants $2.5M
    - Internships, Research and Travel Programs, Workshops – 2056 participants $49.9M
      - Michigan Tech: Ugrad, grad, postdoc and faculty, $215,500, DOE, Army, FDA, NETL
  - ORAU sponsored and administered programs
    - 5 programs – ~9 participants, ~$500K
Moving Forward

- Actively pursing joint proposals
  - ORAU program plus universities
  - ORNL with universities
  - Facilitating collaborative proposals between universities
- Negotiating MOUs with all member universities
- Funds available to assist with technology field testing
  - University devices used by ORAU program
  - ORAU provides testing location, standard measurements
  - Jointly pursue SBIR, other funding
  - Ultimate goal, Incorporate innovative technology into ORAU work
Annual Council Meeting, March 8-9, 2011

Research and Education Partnership Opportunities in Security and Intelligence

2012 Annual meeting theme: STEM Education
March 14-15, 2012
We are Making a Difference – We are ORAU!