ORAU –
Value through Partnerships

Arlene Garrison, Ph.D.
Vice President, University Partnerships
Oak Ridge Associated Universities
Florida Atlantic University Visit
February 2, 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)

1,200 employees
Annual expenditures of more than $300 million
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
University Partnerships Office (UPO) facilitates interactions

- Collaborative Research: ORNL, Y-12, and multi-university
- Awards to ORAU Institutions
  - Ralph E. Powe Awards to junior faculty
  - HBCU/MEI Faculty Summer Research Program
  - Competitive Travel and Event awards
  - Assistance with technology transfer into ORAU programs
- Education
  - Summer Graduate Course – Neutrons in Biology
  - Graduate Student Fair - August 11, 2010
Powe Junior Faculty Award Grants

- Early career faculty - Competitive Selection
- 30 awards @ $5K ORAU, $5K university match
- 2011 process in progress – decisions in May
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
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 Event Grants - 2011

• New program for 2011
  – Up to $4000

• University of Georgia, Nanotechnology of Infectious Diseases
  – April 1, 2011 Mercer University Graduate Campus, Atlanta, GA

• Virginia Tech, Cybersecurity lectures and Exercise
  – April 1-2, 2011 Blacksburg, VA

• NC State, Summer Course on Neutrons in Biology
  – May 23-27, 2011 Oak Ridge, TN
Annual Council Meeting, March 8-9, 2011

- Research and Education Partnership Opportunities in Security and Intelligence
- HBCU/MEI breakfast event
- Capabilities/interests will be collected and shared

Andy Page and Dick Toohey with Kei Koizumi, assistant director for federal research and development for the White House Office of Science and Technology Policy at 2010 Council Meeting
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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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
  – 7,900 faculty and students annually; 1,000 colleges and universities; $146M 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 7,900 Participants

<table>
<thead>
<tr>
<th>Education Level</th>
<th># of Participants</th>
</tr>
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<tbody>
<tr>
<td>Undergrad</td>
<td>1581</td>
</tr>
<tr>
<td>Graduates</td>
<td>936</td>
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<tr>
<td>Recent Graduates</td>
<td>1384</td>
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<tr>
<td>Postdoctoral Fellows</td>
<td>1322</td>
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<tr>
<td>College and University Faculty</td>
<td>386</td>
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<tr>
<td>K-12 Teachers and Students</td>
<td>2136</td>
</tr>
<tr>
<td>Other scientists &amp; professionals</td>
<td>178</td>
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National Laboratories, Federal Research Centers, and Universities Host Appointments

Program Sponsors Include:

- Oak Ridge National Laboratory
- Department of Energy
- Centers for Disease Control
- Department of Commerce
- Department of Defense
- 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 Oceanic and Atmospheric Administration
- National Science Foundation
- Nuclear Regulatory Commission
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 -$146M total all schools
  – ORAU institutions
    • Fellowship and Scholarship – 157 participants $2.5M
    • Internships, Research and Travel Programs, Workshops – 2056 participants $49.9M
  – Florida Atlantic University
    • ORNL Postdoctoral participant – Aurelain Rusanu
• 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
ORAU’s New Center for Science Education

- Opened in February 2009; a LEED Gold Certified Commercial Building
- To bring tomorrow’s science into today’s classrooms
- To use science and technology to improve science and technology education
We are making a difference
We are… ORAU!