Education, Research, & Service Committee

Research Updates and Collaborating for Success
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Studious inquiry or examination especially: investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of such new or revised theories or laws.
Research Activity Index Results Based on Rank-order Data

The University of Tennessee, Knoxville, is the only public R1 institution in Tennessee.
SPONSORED PROGRAMS = GRANTS AND CONTRACTS FACULTY AND STAFF SECURE FOR UT.

What do sponsored programs revenues pay for?

- **Salaries**
  - ~25% of tenured/tenured track faculty salaries
  - ~13% of staff salaries

- **Student Stipends/Tuition**

- **Equipment**

- **Operations**
• Last year, researchers across the UT System submitted over 3,400 proposals for extramural funding.

• Campus research offices are working to find new opportunities, remove barriers and increase the proposal pipeline.
Total Research Expenditures by Campus

- Research expenditures as reported on the NSF HERD Survey is the gold standard metric.

- System-wide, research expenditures hit an all-time high in FY18 at $417M increasing 46% since FY09.

- The growth over the last two years at UT Knoxville was driven primarily by IACMI.
Federal Research Expenditures by Campus

System-wide federal research expenditures have increased 19% since FY09.
Research Expenditure Rankings as Reported on NSF HERD Survey

TOTAL RESEARCH EXPENDITURES

ALL

PUBLIC

UTC – 375  UTM - NR

UTC – 265  UTM - NR

UTC, 107

UTC+UTIA, 84

UTK+UTIA+UTHSC, 70

UTC+UTIA+UTHSC, 46

UTK, 72

UTHSC, 120

UTHSC, 167

UTIA, 123

UTIA, 170
How do we continue to grow research funding?
Diversify Sources of Funding

As a percentage of total funding, Aspirational Peers have twice as much private funding as the combined UT Knoxville and UTIA institution. Closing the private funding gap is worth $18MM to our institution.
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Traditional Approach: Add Faculty

- **Higher Performers** (Research Funding)
- **Lower Performers** (Research Funding)
TOTAL RESEARCH FUNDING

What would it take to grow total research funding?

Add ~600 additional faculty, funded at a rate of ~2.5x current faculty.

Add ~1,000 additional faculty, funded at a rate of ~2.4x current faculty.

Source: NSF 2017 R&D (HERD) Survey; IPEDS Data Center (Human Resources / Faculty)
TOTAL RESEARCH FUNDING

What is different at Georgia Tech & UC Berkeley?

Source: NSF 2017 R&D (HERD) Survey; IPEDS Data Center (Human Resources / Faculty)
REALIZING THE FULL POTENTIAL OF THE UT-ORNL PARTNERSHIP

- GST Graduate Program
- Science Alliance
- Bredesen Center
- Public Policy Leadership
- Governor’s Chairs
- Joint Institutes
- UT/ORNL Partnerships & Economic Development
- Distinguished Scientists
- Joint Faculty Program
- UT Facilities at ORNL
REALIZING THE FULL POTENTIAL OF THE UT-ORNL PARTNERSHIP

Oak Ridge Institute @ UT

Requires ten-year commitment to become self-sustaining.

- Focused interdisciplinary problem-based science and engineering.
- Recruit 60 new researchers/faculty complemented by ORNL scientists.
- Grow joint PhD program to 500 students.
- Attract $150++ million in new research funding annually.

*Positions UT as a Top Public Research Institution!*
TOTAL RESEARCH FUNDING

Impact of ORI Investment

$200
$400
$600
$800
$1,000
$1,200

TOTAL RESEARCH FUNDING (in Millions $)

2017 Tenure/Tenure Track Faculty

UTK+UTIA+ORI

Source: NSF 2017 R&D (HERD) Survey; IPEDS Data Center (Human Resources / Faculty)
Conclusion

To grow UT’s research enterprise, we must employ both traditional and novel approaches:

• Identify opportunities and eliminate barriers to success
• Diversify funding sources
• Recruit faculty in growth areas
• Leverage and enlarge our unique partnership with ORNL
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