Research & Engagement - Reflecting and Moving Forward

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Interim Vice Chancellor for Research
Vol Vision 2020

• Priority 3: Research, Scholarship, Creative Activity, and Engagement
  • Recognize contributions beyond sponsored research
  • Improve competitiveness for sponsored research through proposal support and new strategic partnerships
  • Increase student research opportunities to improve academic quality
  • Invest in research and information infrastructure
ORE Operating & Investment Funds

- **ORE base budget** - $4.5M salary and operating budget
- **Additional Mission Support** – $400K for undergraduate research and compliance
- **Strategic and Transformative Investments in Research (STIR)** - $1.75M
- **Scholarly and Research Incentive Funds (SARIF)** - $904K
  - Support equipment, humanities, exhibits, performances, publishing, foreign travel, conferences, faculty scholarly research, faculty fellowships, open publishing.
- **Joint Institutes** - $1.3M annual allocation used to support JIAM, JIBS, JICS, and JINS
- **Start-up** – Annual allocation of $5.6M.
  - $3.8 M obligated in FY18 to provide 50% support of start-up packages provided to new faculty.
- **Bridge funding** - $350K available in funding for bridge support
- **Cost share** – $1.5M annual allocation in support of external funding
- **Science Alliance**- $5.4M annual allocation & ORNL matching in FY 18.
  - Program currently supports Distinguished Scientists, Joint Directed Research & Development, Graduate Research Assistants, Economic Development and appropriate cluster initiatives.
Key Outcomes 2017-2018

1. Increased total research expenditures 11 percent, for an all-time high of $203M.

2. Grew federal research expenditures 7 percent to $117M.

3. Grew the total number of faculty with external funding or writing proposals for external funding to an all-time high of 54 percent.

4. Increased undergraduate participation in research by more than 50 percent to 2,205.

5. Transitioned many of the offices to electronic platforms to increase efficiencies and decrease faculty burden.

6. Improved safety oversight of teaching laboratories.
Proposal Amount Comparison
FY18 versus FY17

SOURCE: Cayuse SP
Increasing Proposals FY18

Our Faculty

• 483 (46%) faculty submitted a proposal
• 1,726 proposals (n = 605 TKE; 520 A&S; 290 S&I)

Seed Program

• **Community Engaged Research Seed** – Support research that will positively impact our local, state, regional, and global communities
• **Mission Agency Research Seed** – Diversify our research portfolio and increase the number of mission agency research projects
• **Interdisciplinary Research Seed** – Grow the number and success rate of large multidisciplinary funding grants
• **Biomedical Research Seed** – Foster more successful proposals to life sciences programs
Total Research Expenditures Comparison
FY18 versus FY17

SOURCE: Estimate NSF HERD Survey
SOURCE: Cayuse SP
Research Activity for UT Knoxville
FY13-FY17 (Dollars in Millions)
Growth in the Research Enterprise

Federal Research Expenditures by Agency & by FY

<table>
<thead>
<tr>
<th>FY</th>
<th>All Other Agencies</th>
<th>USDA</th>
<th>NASA</th>
<th>HHS</th>
<th>DOD</th>
<th>NSF</th>
<th>DOE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2013</td>
<td>$16 M</td>
<td>$5 M</td>
<td>$18 M</td>
<td>$41 M</td>
<td>$34 M</td>
<td>$34 M</td>
<td></td>
</tr>
<tr>
<td>FY2014</td>
<td>$13 M</td>
<td>$4 M</td>
<td>$11 M</td>
<td>$45 M</td>
<td>$36 M</td>
<td>$36 M</td>
<td></td>
</tr>
<tr>
<td>FY2015</td>
<td>$13 M</td>
<td>$5 M</td>
<td>$9 M</td>
<td>$39 M</td>
<td>$36 M</td>
<td>$36 M</td>
<td></td>
</tr>
<tr>
<td>FY2016</td>
<td>$11 M</td>
<td>$6 M</td>
<td>$10 M</td>
<td>$34 M</td>
<td>$44 M</td>
<td>$44 M</td>
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</tr>
<tr>
<td>FY2017</td>
<td>$9 M</td>
<td>$7 M</td>
<td>$10 M</td>
<td>$26 M</td>
<td>$60 M</td>
<td>$60 M</td>
<td></td>
</tr>
</tbody>
</table>
Federal Obligations for Research By Science Field, FY2015

Source: Survey of Federal Funds for Research and Development
Obligated Award Amount Received by UTK By Science Field, FY2016

Source: Survey of Federal Funds for Research and Development
Number of UT Publications By Science Field, 2016

Source: Scopus Publication/Citation Database
## Number of Citations to UT 2016 Publications By Science Field, as of Oct. 2017

<table>
<thead>
<tr>
<th>Engineering</th>
<th>Physical Sciences</th>
<th>Life Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials Science</td>
<td>Chemical Engineering</td>
<td>Biochemistry, Genetics &amp; Molecular Biology</td>
</tr>
<tr>
<td>Environmental Sciences</td>
<td>Earth and Planetary Sciences</td>
<td>Agricultural &amp; Biological Sciences</td>
</tr>
<tr>
<td>Computer Science &amp; Information Systems</td>
<td>Mathematics</td>
<td>Immunology &amp;...</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>Psychology</td>
<td>Molecular Biology</td>
</tr>
</tbody>
</table>

Source: Scopus Publication/Citation Database
Research Quality: Publications, Citations

• The number of publications from UT have increased by 29% since 2012*

• UT consistently ranks in the low 30’s in number of citations and H-Index among all public universities+

* Thompson Reuters’ Web of Science  + Center for Measuring University Performance (CMUP)
National Endowment for the Humanities Fellowships

UTK ranks eleventh in the number of highly prestigious NEH faculty fellowships received since ORE started an advising program in 2005.

<table>
<thead>
<tr>
<th>University</th>
<th>Fellowships</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Notre Dame</td>
<td>41</td>
</tr>
<tr>
<td>Ohio State University</td>
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</tr>
<tr>
<td>University of Michigan, Ann Arbor</td>
<td>25</td>
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<tr>
<td>Princeton University</td>
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<tr>
<td>University of Chicago</td>
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<tr>
<td>Washington University in St. Louis</td>
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<tr>
<td>University of Texas, Austin</td>
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<tr>
<td>University of Illinois, Urbana-Champaign</td>
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<tr>
<td>University of North Carolina, Chapel Hill</td>
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<tr>
<td>University of California, Berkeley</td>
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<tr>
<td>Harvard University</td>
<td>16</td>
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<tr>
<td><strong>University of Tennessee, Knoxville</strong></td>
<td><strong>16</strong></td>
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Strategy Enhancement #2
Undergraduate Research and Engagement

Supporting the undergraduate discovery process across all disciplines through centralized programs.

• **Goal: 20% by 2022**
• Over 2,000 students actively participated in research last year
• **Over 800 students** presented their research at the annual research day event - EURēCA
• In summer 2018, UT hosted 7 faculty-led summer undergraduate research sites funded by NSF, USDA, and NIH
• Identifying **R-designated courses** to help meet the 20% by 2022 goal

Providing leadership and coordination for enhancing UT’s community-campus partnerships for research, teaching, and outreach.

• **Supporting Engaged Scholarship**
• Alignment of state and community needs and competitive funding
• Development of a statewide map of engagement (all 95 counties)
• Upcoming UT Engagement and Outreach Conference, October 8, 8:30-3:30, Baker Center
Strategy Enhancement #3
Research Communications

• Increase UTK’s research communications in national press to 3X/month by FY21
• Celebrate faculty and student successes
• Strategize communications around research strengths
• Coordinate efforts with Communications & Marketing to extend reach
• Create informative and engaging print materials
• Workshops related to research support, funding, compliance, and proposal writing and submission
• Share recent awards, publications, and successes

Subscribe to ORE newsletters and listservs at research.utk.edu/subscribe
Strategy Enhancement #4
Mitigating Risks in Research

- **Research and Engagement**
  - Human and Animal Subject Research, Export Controls, Scientific Misconduct, and Laboratory Safety

- **Equity and Diversity**
  - Title IX and Discrimination

- **Finance and Administration**
  - Safety, Emergency Management, Sponsored Project Accounting, and Information Technology
Emerging Risks

**RISE IN RETRACTIONS FOR MISCONDUCT**

Number of retracted articles for specific causes by year of retraction.

Final Thoughts

• To build Research Intelligence, we would like to partner and build research portfolios
• We are looking for Innovation and would like to hear your thoughts
• We want to partner with colleges and departments (e.g. research retreats; supporting ideas; etc.)
• We have a strong foundation, and I remain optimistic that we can continue to fulfill our mission to serve you