Federal Research Funding Response Task Force
Final Report

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Charge
The University of Memphis Federal Research Funding Response Task Force was established in May 2021 to monitor activity related to anticipated significant increases in federal spending for research. The Task Force was charged with developing a set of recommendations that will best position the UofM to successfully respond to and take advantage of new federal funding opportunities. The scope of work for the Task Force included tracking large-scale federal legislation, examining research infrastructure and strategy of R1 institutions, and identifying institutional gaps and areas for strategic investment to best position the UofM to be successful in advancing its research enterprise through large-scale federal funding.

Federal Funding Landscape
It is anticipated that substantial increases to federal spending for research will be included in several pieces of legislation currently circulating in the House and Senate.

- *The U. S. Innovation and Competition Act (formerly known as the Endless Frontiers Act)* – Bipartisan legislation passed in the Senate that includes substantial increase in funding for the National Science Foundation. This includes establishing a new Technology and Innovation Directorate to strengthen the U.S.'s position related to critical technologies through basic and applied research.
- *Infrastructure Investment and Jobs Act* – Bipartisan legislation passed in the Senate that legislates significant funding for transportation (all modes), energy, drinking water and wastewater, and broadband infrastructure. Core to this legislation is a focus on investment in research, development, and deployment of emerging technologies that improve safety, efficiency, sustainability, livability, equity, and access for U.S. communities. Additionally, there is substantial focus on workforce development, training, and education programs that attract, retain, and advance diverse populations in careers in these areas.

Both Acts have passed the Senate and now must be considered by the House. While it is acknowledged that many changes may occur to this legislation prior to passage and signing into law, there are several key areas of focus that are likely to remain intact:

- Focus on critical technologies: Artificial intelligence, high-performance and quantum computing, robotics, advanced manufacturing, cybersecurity, advanced communications technology, biotechnology, and advanced energy technologies.
- Expanded funding for interdisciplinary STEM research
- Expansion of public-private R&D efforts and entrepreneurship
- Focus on equity and access
- Workforce development – with specific emphasis on increasing diversity in STEM disciplines

The UofM must position itself to compete at a national level in these areas. This will require strategic investments that leverage our institutional strengths, expand multi-disciplinary collaborations, and create a sustainable model for growth of the UofM's research enterprise.

Institutional Gaps

The Task Force compared research infrastructure at the UofM with that of R1 institutions to determine needs for strategic investment. These gaps in infrastructure limit our ability to expand our research footprint and grow our research capacity. The following are areas where there is a substantial difference between our current infrastructure and that of R1 institutions:

- **Research Support**
  - *Pre- and post- award support* – All of the current UofM offices (including the Office of Sponsored Projects, college pre-award resources, and Grants Accounting) are understaffed when compared to R1 institutions. Current delays experienced in grant processing, limited post-award support, and issues with account setup, tracking, and invoicing are significant. In addition, the account closeout process needs to be improved to ensure timely and accurate invoicing, reporting, and documentation as projects end. These delays and inaccuracies create substantial issues for current faculty and will not support increased research activity. There is also need for further streamlining of the IRB application and review process.
  - *Federal government relations* – While the UofM has strong government relations support for local and state activities, increased presence at the federal level is required. R1 institutions have dedicated staff (in the case of large R1 institutions, staff are dedicated by agency) that support development of federal relationships (both legislative and program officer relationships). Some research Universities have liaison offices or representatives in the Washington, DC area to provide input to agencies and facilitate large funding initiatives.
- **Research culture**
  - Most R1 institutions have a small number of core research focus areas that are broad, highly interdisciplinary, and set the research agenda for the institution. These focus areas also allow strategic investments in terms of cluster hires, seed funding, and targeted support staff. The UofM needs a more coordinated and clearly communicated approach in this regard.
  - A review of websites of R1 institutions reveals that there is a commonality among the websites of these institutions that is not found on the UofM website: a research-forward design. Research is central to the mission of R1 institutions and is immediately visible on institution websites. In fact, research activity/highlights

are promoted to attract both undergraduate and graduate students. Research visibility is limited via the UofM site, as was also noted in the Research Vision Committee report several years ago.

- **Institutional Capacity**
    - *STEM Faculty* – The number of faculty in STEM areas is significantly lower at UofM than at R1-peer institutions, and most research-active faculty are at capacity. This limits our ability to significantly expand our research activity and compete for the anticipated release of large-scale federal research funding.
    - *Partnerships* – Multidisciplinary teams and large-scale projects will be a focus of significant federal funding opportunities. This will require expansion of relationships with both internal and external partners. Additionally, many large-scale federal research funding opportunities require non-STEM faculty involvement to promote cross-disciplinary workforce development.

Recommendations

To address the gaps identified in the UofM's research infrastructure and to position the institution to grow its research capacity and successfully compete for increased federal research dollars, the Task Force makes the following recommendations:

1. **Strengthen research support by investing in pre- and post- award staffing and dedicated federal government relations.** This investment should not only provide appropriate resources for existing faculty but should create a sustainable model for significant growth. Currently, there are not enough staff for pre- and post-award support centrally or at the college level to adequately support existing research activity. Attention must also be given to OSP and grants accounting staffing to provide competitive wages as compared to the private sector. In terms of research development and government relations, the new research development staff that are being hired to support Department of Defense and Agtech focus areas are a step in the right direction, but additional staff that develop strong legislative relationships are essential for UofM to compete at a national level.
2. **Strengthen research culture by developing a core set of research focus areas that are communicated widely and highlight multidisciplinary collaborations**. Ensure that all divisions of the University are on board with a research-forward mindset that is required for R1 institutions and that this is evident in all university communications, including the UofM website. Collaboration should be supported through an institutional culture that provides appropriate credit to all collaborating faculty, not only the PI.
3. **Increase institutional research capacity through strategic hires and partnership development**. Investments in research faculty lines and post-docs may be an alternative to strictly tenure-track traditional faculty positions, particularly in identified research focus areas. A coordinated approach to development of strong cross-disciplinary relationships on our campus (that include both STEM and non-STEM faculty) as well as partnerships with HBCUs, MSIs, institutions with complementary expertise, and industry is needed. It is essential to support development of these relationships now so that UofM is well-positioned for future federal opportunities that will build a sustainable R1 institution for our region.