Funding Opportunity: DOD Releases FY 2023 Multidisciplinary University Research Initiative (MURI) BAA

Lewis-Burke Associates LLC – February 11, 2022

The Department of Defense (DOD) released a broad agency announcement (BAA) for the fiscal year (FY) 2023 Multidisciplinary University Research Initiative (MURI). Initiated over 25 years ago, MURI remains one of the most popular programs among researchers at institutions of higher education and stands as the benchmark for building a defense-oriented research capability on campus. With the goal of understanding and achieving revolutionary breakthroughs on behalf of the warfighter, each MURI program is managed closely by a program manager from one of the Services supporting high-risk basic research in science, economic growth, and military technology.

The Army, Navy, and Air Force basic research offices have released 24 topics this year. Like previous years, the FY 2023 topics have an emphasis on materials and quantum sciences, but also a focus on issues related to climate. FY 2023 MURI topics include:

**Army Research Office (ARO)**
1. Integrated Bio-Hybrid Actuators
2. Neuro-Inspired Distributed Deep Learning (NIDDL)
3. Chemical and Microbial Indicators of Permafrost Degradation from Changes in Climate
4. Dynamically Tunable and Enhanced Thermal Conductivity in Polymeric Materials
5. The Stranger Within: The Ecology of the Brain
6. Control Theory for Novel Quantum Error Correction
7. Emergent Refractory Behaviors in Earth and Extraterrestrial Materials

**Office of Naval Research (ONR)**
8. Supremacy over Quantum: Efficient Real-World Optimization on Stochastic Binary Networks
9. Identifying the Fundamental Properties of Biological Soft Structures Subjected to High Hydrostatic Pressure that Preserve Structural and Functional Integrity of Deep-Sea Organisms
10. Advance Mixed-Precision and Deep Learning Algorithms for Computation of Multiscale-Multiphysics and Optimization Models
11. Fundamental Processes in Solid-Fuel Combustion
12. Climate Change Risk and Decision Superiority
14. Building Overall Cognitive Capability through Attention Control
15. Assessing the Role of Marine Biology in Driving Ocean Mixing Using Autonomous Sampling of Microstructure and eDNA (BIOMUX)
16. Spatially Programmed Material Properties via Designed Meso-Structures
17. Excited State Chemistry of Preceramic Polymers

**Air Force Office of Scientific Research (AFOSR)**
18. Fluid-(Sub-) Surface Material Interactions for Passive Flow Control
19. Quantum Spin Effects in Chiral Matter
DOD encourages faculty to engage with the Research Topic Chiefs assigned to each topic area (see section II.H) through the white paper process to assess the feasibility of proposed topics. Topics listed above describe the focus areas important to each Service and are not meant to restrict the possible directions awarded research could take.

**White Papers:** While not required, prospective awardees are strongly encouraged to submit white papers before 11:59 PM Eastern Time on May 16, 2022, to minimize the labor and cost associated with the production of detailed full proposals.

**Timeline for Submission:**
- Questions on eligibility and technical requirements are due by May 2, 2022
- White papers are due May 16, 2022, by 11:59 PM ET
- Notifications of initial evaluations of white papers are expected on June 13, 2022
- Questions for Grants Officer on proposal submission are due by August 26, 2022, by 11:59 ET
- Full proposals are due on September 9, 2022, by 11:59 PM ET
- Notification of selection for awards are expected to be made on February 1, 2023
- Grants are estimated to start on April 1, 2023

**Total Funding and Award Size:** DOD expects $190 million to be made available for five years, pending out-year appropriations. Typical individual awards range from $1.25 to $1.5 million, per year.

**Eligibility and Limitations:** The competition is open to U.S. institutions of higher education, including DOD institutions of higher education, with degree-granting programs in science and or engineering. A University Affiliated Research Centers (UARC) is an eligible applicant, if it is affiliated with a U.S. institution of higher education and not Federally Funded Research and Development Center. While industry, DOD laboratories, and foreign universities may not receive funding, DOD encourages universities to collaborate with entities focused on applied and transitional research for potential commercial applications of MURI-funded research.

**Sources and Additional Information:**
- Additional information on DOD’s university-focused basic research efforts, including MURI, can be found by visiting the following Services’ websites:
  - Air Force - [https://www.afrl.af.mil/About-Us/Fact-Sheets/Fact-Sheet-Display/Article/2282120/afosr-funding-opportunities-university-research-initiative-uri/#anchor3](https://www.afrl.af.mil/About-Us/Fact-Sheets/Fact-Sheet-Display/Article/2282120/afosr-funding-opportunities-university-research-initiative-uri/#anchor3)