

**Agendum
Oakland University
Board of Trustees Formal Session
February 7, 2022**

**ACCEPTANCE OF GRANTS AND CONTRACTS TO OAKLAND UNIVERSITY
FOR THE PERIOD OF NOVEMBER 1 – DECEMBER 31, 2021**
A Recommendation

1. **Division and Department:** Academic Affairs/Research Office
2. **Introduction:** Oakland University contributes to our national agenda as a contributor to the nation's scientific and technological progress, both through the generation of new knowledge and ideas and the education and training of its students. Grants and contracts awarded to Oakland University play a critical role in the advancement of new research findings, and current research trends gives emphasis to inter-disciplinary, technology-driven, and product-oriented team efforts.

The Board of Trustees (Board) has authorized the President, or his or her designee, to receive and acknowledge grants and contracts to the University, but such grants and contracts must be reported to the Board not less often than quarterly for acceptance on behalf of the University.

At this time, we request that the Board accept the grants and contracts reported on the attached Grants and Contracts Report, Attachment A, for the period of November 1 through December 31, 2021.

3. **Previous Board Action:** The Board accepts grants and contracts to Oakland University on a regular basis at its Formal Sessions.
4. **Budget Implications:** Grants and contracts contribute to the University through the recovery of direct and indirect expense incurred in support of research projects.
5. **Educational Implications:** Grants and contracts enhance the training and education of students.
6. **Personnel Implications:** Grants and contracts awards may provide salary support for faculty, post-doctoral fellows, undergraduate and graduate students, technicians, lab managers, and other personnel, as required by the funded research project or program.
7. **University Reviews/Approvals:** All grants and contracts are reviewed by the Research Office prior to submission to the Board to ensure compliance with federal and state laws and regulations and University policies and procedures, when applicable, and with assistance from the Office of Legal Affairs when requested.

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8. **Recommendation:** RESOLVED, that the Board of Trustees accept grants and contracts to Oakland University identified in the attached Grants and Contracts Report, Attachment A, for the period of November 1 - December 31, 2021.
9. **Attachments:** A. Grants and Contracts Report.

Submitted to the President
on 2/3/22, 2022 by



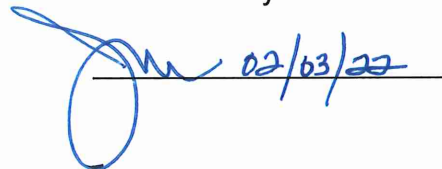
Britt Rios-Ellis, M.S., Ph.D.
Executive Vice President for
Academic Affairs and Provost

Recommended on 2/4, 2022
to the Board for approval by



Ora Hirsch Pescovitz, M.D.
President

Reviewed by



Grants and Contracts Report for Period November 1 - December 31, 2021

| Principal Investigator | Awarding Agency | Title and Project Abstract | Award Amount | Total Award All Years |
|--|--------------------------------|--|--------------|-----------------------|
| Gopalan Srinivasan Department of Physics | United States Air Force | Electric Field Control of Magnetism in Ferrites for Sub-THz Electronics. The goal of this research on electric field control of magnetic properties is aimed at miniaturization of self-biased ferrite devices for possible integration with semiconductor devices. | \$ 140,000 | \$ 423,798 |
| Toni Glover School of Nursing | Michigan Health Endowment Fund | The Michigan ELNEC Initiative: Preparing Nursing Students for Primary Palliative Care. The goal of this project is to facilitate nursing students' acquisition of primary palliative care knowledge and skills through partnership and collaboration between the Oakland University School of Nursing faculty and Michigan community colleges. The primary outcome will be 2,000 Michigan nursing students prepared to provide primary palliative care as they enter the nursing workforce. | \$ 218,373 | \$ 218,373 |

Grants and Contracts Report for Period November 1 - December 31, 2021

| Principal Investigator | Awarding Agency | Title and Project Abstract | Award Amount | Total Award All Years |
|--|---|--|---------------------|------------------------------|
| Teresa Rodges Pre-College Programs | State of Michigan Department of Education | GEAR-UP - Gaining Early Awareness and Readiness for Undergraduate Program 2022. This program is designed to provide academic and social support for students currently in their first year of college. Support will be in the form of tutoring, study tables, mentoring, and improving soft skills. | \$ 101,727 | \$ 101,727 |
| Ilias Cholis Department of Physics | Department of Energy | Searching for Dark Matter Signals in Cosmic-Ray and Gamma-Ray Observations. The goal of this research is to minimize astrophysical background uncertainties and suggest probes to discriminate from astrophysical sources that could mimic dark matter-like signals. | \$ 60,000 | \$ 60,000 |
| Laurel Stevenson Department of Interdisciplinary Health Sciences | Blue Cross Blue Shield MHEF W.K. Kellogg Foundation | Prescription for a Healthy Oakland-Expansion to Oak Park. The purpose of this project is to grow and expand the reach of this produce prescription program to the southeast area of Oakland County, where high levels of food and nutritional insecurity exist. | \$ 60,000 | \$ 60,000 |

Grants and Contracts Report for Period November 1 - December 31, 2021

| Principal Investigator | Awarding Agency | Title and Project Abstract | Award Amount | Total Award All Years |
|--|----------------------------------|---|--------------|-----------------------|
| Colin Wu Department of Chemistry | National Science Foundation | CAREER: Molecular Recognition of 8-Oxoguanine Modified G-Quadruplexes by the FANCI Helicase and the REV1 Polymerase. The long-term goals of this research are to establish a Molecular Biophysics program at Oakland University and to develop an interdisciplinary single-molecule research community with my colleagues. | \$ 375,227 | \$ 945,910 |
| Khalid Mahmood Malik Department of Computer Science and Engineering | Wayne State University MEDC | Deep Forgery Detector. The goal of this project is to develop a unified tool, Deep Forgery Detector, to detect various audio-visio forgeries, including various types of deepfakes, that are used in the manipulation and/or falsification of digital multimedia. | \$ 92,500 | \$ 92,500 |
| Mohamed Zohdy Department of Electrical and Computer Engineering | Tuskegee University USAF STTR | Lithium-Air Batteries for Urban Air Mobility (UAM). In collaboration with Tuskegee and Johnson, Oakland University will develop a novel Li-Air Battery and assemblies for VTOL Aircraft. | \$ 25,000 | \$ 25,000 |

Grants and Contracts Report for Period November 1 - December 31, 2021

| Principal Investigator | Awarding Agency | Title and Project Abstract | Award Amount | Total Award All Years |
|---|--|---|--------------|-----------------------|
| Ngong Kodiah Beyeh Department of Chemistry | American Chemical Society | Effect of Container Molecules on the Colloidal and Bulk Properties of Petroleum Asphaltenes. The goal of this research is to advance scientific knowledge by expanding on how macrocyclic receptors affect the polydispersity, stability, and morphology of asphaltene aggregation. The results will substantially improve the design and synthesis of new types of asphaltene dispersants that can demonstrably be more useful to the crude oil industry. | \$ 110,000 | \$ 110,000 |
| Christopher Cooley Department of Mechanical Engineering | United States Army Research Laboratory | Damage-Induced Nonlinear Dynamics of Rotorcraft Planetary Gears. Planetary gears are crucial elements of rotorcraft transmissions that impact the vehicle's overall capability, maneuverability, reliability, and range. This research aims to create a new predictive analytical framework for nonlinear dynamics in planetary gears with tooth root crack and surface pit damage. | \$ 104,266 | \$ 321,479 |

Grants and Contracts Report for Period November 1 - December 31, 2021

| Principal Investigator | Awarding Agency | Title and Project Abstract | Award Amount | Total Award All Years |
|--|------------------------|--|---------------------|------------------------------|
| Sujoy Roy Foundational Medical Studies | Beaumont Hospital | Machine Learning of Radiology Reports in EHR to Screen for Lung Disease. The goal of this project is to develop and test deep learning-based natural language processing (NLP) methods to infer features from radiology reports in the EHR to identify patients with interstitial lung disease (ILD). Future applications for extramural support will focus on the hypothesis that the refined NLP method will enable earlier detection of individuals with ILD, thereby allowing focused interventions that will delay disease progression and improve outcomes. | \$ 25,247 | \$ 25,247 |
| Total Awards | | | \$ 1,312,340 | \$ 2,384,034 |