

Agendum  
Oakland University  
Board of Trustees Formal Session  
April 20, 2023

**ACCEPTANCE OF GRANTS AND CONTRACTS TO OAKLAND UNIVERSITY**  
**FOR THE PERIOD OF JANUARY 1 – FEBRUARY 28, 2023**  
**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 January 1 through February 28, 2023.

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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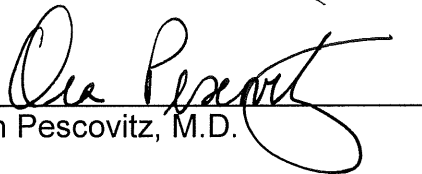
8. **Recommendation**: RESOLVED, that the Board of Trustees accept grants and contracts to Oakland University identified in the attached Grants and Contracts Report, Attachment A, for the period of January 1 – February 28, 2023.
9. **Attachments**: A. Grants and Contracts Report.

Submitted to the President  
on 4/14, 2023 by



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

Recommended on 4/16, 2023  
to the Board for approval by



Ora Hirsch Pescovitz, M.D.  
President

Reviewed by



Joshua D. Merchant, Ph.D.  
Chief of Staff and  
Secretary to the Board of Trustees

## ATTACHMENT A

### Grants and Contracts Report for Period January 1 - February 28, 2023

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Dwayne Baxa Department of Foundational Medical Studies	SeaSpine Inc.	<b>Evaluation of Bacteriostatic Characteristics of NanoMetaline.</b> This study aims to determine viability and adherence capability of Cutibacterium acnes and Staphylococcus aureus on Titanium and PEEK materials. C. acnes is associated with surgical infections due to colonization in follicular pores in skin at the surgical site.	\$ 16,811	\$ 16,811
Teresa Rodges Student Affairs	State of Michigan	<b>GEAR-UP - Gaining Early Awareness and Readiness for Undergraduate Program 2023.</b> The GEAR-UP College Day Program is designed to provide academic and social support for students currently in 12th grade with support continuing through their first year of college. As a result of their active participation, students will be adequately prepared for college. The program will provide an opportunity for underrepresented students to discover first hand the potential of college.	\$ 101,303	\$ 101,303

**Grants and Contracts Report for Period January 1 - February 28, 2023**

<b>Principal Investigator</b>	<b>Awarding Agency</b>	<b>Title and Project Abstract</b>	<b>Award Amount</b>	<b>Total Award All Years</b>
<b>Anthony Valance Washington</b> Department of Biological Sciences	National Institutes of Health	<b>Translation Studies of the Planet Specific Receptor Trem Like Transcript.</b> We hypothesize that Triggering receptor expressed in myeloid cells (TLT-1's) interaction with fibrinogen is a major pathway by which the immune system commandeers the hemostatic system for immune function. In this application we will mechanistically define this interaction and demonstrate its usefulness as a therapeutic target.	\$ 387,615	\$ 1,197,862
<b>Xiangqun Zeng</b> Department of Chemistry	National Institutes of Health	<b>Real-Time Monitoring and Scavenging of Reactive Oxygen Species (ROS) to Enhance Cochlear Implant.</b> This is a multidisciplinary project for developing paradigm-shifting technology for real-time monitoring and scavenging reactive oxygen species for peri-operative cochlear implantation towards enhancement of post-operative outcomes in cochlear implantees.	\$ 18,945	\$ 419,965
<b>John Meldrum</b> Undergraduate Admissions	Diploma Equity Project / Rocket Community Fund	<b>Diploma Equity Project.</b> The goal of this project is to identify a system of sustainable student supports at OU that will place entering students on a path to persist/complete at a rate equal to or greater than campus average.	\$ 230,000	\$ 230,000

**Grants and Contracts Report for Period January 1 - February 28, 2023**

<b>Principal Investigator</b>	<b>Awarding Agency</b>	<b>Title and Project Abstract</b>	<b>Award Amount</b>	<b>Total Award All Years</b>
Krzysztof Kobus Department of Mechanical Engineering	Michigan Department of Labor and Economic Opportunity	<b>Michigan College and University Partnership (MICUP) - Year 6.</b> A College / University Partnership with MCC and OCC, building on the M2O and O2O programs to create a service avenue for students interested in high-tech fields with a focus on bioengineering, renewable energy and mechatronics. The partnership will include student services to help them remain in the program from the community college to Oakland University.	\$ 88,735	\$ 354,940
Omar Brown-EI Center for Multicultural Initiatives	Michigan Department of Labor and Economic Opportunity	<b>Select Student Support Services (4S) -year 6.</b> Collectively Oakland Retains Everyone (CORE) Program 4-S King Chavez Parks. CORE is a program that pairs underrepresented students with lower grade point averages and/or lower SAT with resources that focus on their specific needs. Students in the target population are required to attend a week-long summer enrichment program.	\$ 100,483	\$ 301,449

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<b>Edward Rohn</b> Department of Interdisciplinary Health Sciences	C.H. Neilsen Foundation	<b>Shared Decision-Making in Spinal Cord Injury-related Chronic Pain Management.</b> The goal of this project has three aims: 1) identify and describe the ways in which persons with Spinal cord injury (SCI) convey their chronic pain (CP) and negotiate CP management strategies with healthcare providers; 2) identify and describe the ways in which SCI healthcare providers interpret CP information and manage treatment strategies with patients during clinical encounters; 3) tailor an Option Grid shared decision-making aid for specific use in SCI-related CP management shared decision-making.	\$ 550,000	\$ 550,000
<b>Gopalan Srinivasan</b> Department of Physics	University of Connecticut (National Science Foundation)	<b>EAGER: Magnetoelectric Thin Films for High Frequency Devices.</b> The Co-PI, The goal of this research is fabrication of high frequency devices. Efforts will focus on improvement of electric and magnetic field tunability of the devices and reduction of insertion loss.	\$ 25,170	\$ 51,195
<b>Mohamed Al-Shabrawey</b> Department of Foundational Medical Studies	National Institutes of Health	<b>BMP2/ALKs Signaling System in Diabetic Retinopathy.</b> The goal of this project is to test the hypothesis that in diabetes, Bone morphogenetic protein-2 compromises the blood-retinal barrier and induces extracellular matrix formation through the endothelial Alk2/3-dependent mechanism.	\$ 356,260	\$ 1,146,886

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<b>Kwame Sakyi</b> Department of Public and Environmental Wellness	Center for Learning and Childhood Development-Ghana	<b>CLDC-Ghana Research Initiative.</b> This project will give the PI focused time for creating a research arc that involves the Center in Ghana, consistent with their mission and funded by grants or consultancies.	\$ 7,063	\$ 13,628
<b>Mark Manning</b> Psychology	Proctor and Gamble	<b>Community-Based Undergraduate Research Experience.</b> The goal of this project is to improve the workforce readiness of undergraduate social science students who are interested in pursuing careers in community/public health.	\$ 10,000	\$ 10,000
<b>Vardan Karamyan</b> Department of Foundational Medical Studies	National Institutes of Health	<b>Development and Characterization of Peptidomimetic Small Molecule Activators of Peptidase Neurolysin for Stroke Therapy.</b> With this research we seek to develop potent and selective 'drug-like' small molecule activators of peptidase neurolysin (Nln) which will be used as research tools and lead chemical entities to move the drug discovery process forward for development of a novel class of drugs.	\$ 578,588	\$ 578,588

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Wing-Yue Louie Electrical and Computer Engineering	National Science Foundation	<p><b>CAREER: Towards Programmable Social Robots for Everyone: A Teacher-in-the-Loop Learning from Demonstration Framework.</b></p> <p>The long-term goal of this research is to bridge the gap between non-technical experts and social robots so they can be effectively, intuitively, and efficiently used as well as personalized by the general population for society's needs. Towards that goal, this CAREER will develop an end-to-end LfD framework for non-technical experts to teach a social robot a task by keeping the teacher-in-the-loop throughout the entire robot learning process.</p>	\$ 165,058	\$ 586,842



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<b>Mark Manning</b> Psychology	National Institutes of Health	<p><b>Colorectal Screening Fear-Reduction and Racially-targeted Norm Messaging Entreaties to Increase Colorectal Cancer Screening Rates among African Americans.</b></p> <p>Colorectal cancer (CRC) is one of the leading causes of cancer mortality in the United States, and African Americans (AfAms) still fare worse in CRC incidence and mortality compared to European Americans (EuAms). Interventions to increase CRC screening rates among AfAms are instrumental to address the disparities in CRC incidence and mortality. This study is significant because it directly addresses documented CRC screening deficits among an underserved population, and is innovative given its design of a theory-based and literature informed intervention to address previously unaddressed barriers to CRC screening among AfAms.</p>	\$ 18,750	\$ 412,500
<b>Marouane Kessentini</b> Computer Science and Engineering	Ground Vehicle Systems Center / DOD	<p><b>Multi-Objective Rapid Generation of Virtual Environments and Data Analysis in Multi-User Immersive Gaming Environments for Testing New Crew Interface Concepts.</b></p> <p>The main aim of this project is to rapidly configure and test new crew interface concepts in an AR/VR framework and also enable efficient data mining to extract relevant patterns from immersive simulations including interaction data and interview data.</p>	\$ 954,750	\$ 954,750

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Wing-Yue Louie Electrical and Computer Engineering	Ground Vehicle Systems Center / DOD	<b>Virtual Experimentation for Soldier Evaluation of Autonomous and Non-Autonomous Combat Vehicle Technologies Using Immersive Gaming Environments.</b> A promising direction for addressing challenges with developing new enabling military engagement technologies is the adoption of immersive gaming environments to introduce end-users to enabling technologies earlier. This research project proposes a new paradigm for experimentation of ground vehicles, robots, and other enabling technologies that utilizes immersive gaming to reduce the time needed to develop virtual prototypes, involve soldiers earlier in assessment of developing technologies, and surpass the inherent limitations of data collection.	\$ 1,472,494	\$ 1,472,494
<b>Total Awards</b>			<b>\$ 5,082,025</b>	<b>\$ 8,399,213</b>