Agendum
Oakland University
Board of Trustees Formal Session
October 12, 2020

ACCEPTANCE OF GRANTS AND CONTRACTS TO OAKLAND UNIVERSITY FOR THE PERIOD OF JULY 1 - AUGUST 31, 2020
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 July 1 – August 31, 2020.

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.

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 July 1 – August 31, 2020.

9. **Attachments:** A. Grants and Contracts Report.

Submitted to the Provost
on October 7, 2020 by

C. Michelle Piskulich, Ph.D.
Interim Executive Vice President for
Academic Affairs and Provost

Recommended on 10/8, 2020
to the Board for approval by

Ora Hirsch Pescovitz, M.D.
President

Grants and Contracts Report for Period July 1 - August 31, 2020

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Julian Rrushi Department of Computer Science and Engineering	DARPA/DOD	**A Quest for the Physics of Cyberspace.** This research will integrate novel defensive deception and artificial intelligence into a hardware sideboard to enable a computer to recover from hardware implants. The neutralization of malicious hardware liberates the machine from the intrusion, and allows it to continue its operation.	$ 250,000	$ 754,391
Adam Avery Department of Chemistry	University of Minnesota/NIH	**Drug Discovery for Spinocerebellar Ataxia, Using Novel Fluorescence Technology Targeting Beta-III-Spectrin.** This project will address drug discovery for spinocerebellar ataxia, using novel fluorescence technology targeting Beta-III-spectrin.	$ 84,150	$ 210,836
Erin Baker School of Medicine	Blue Cross Blue Shield of Michigan Foundation	**Evaluating Trunnion-Taper Fretting and Corrosion Damage in Anatomic Total Shoulder and Shoulder Hemiarthroplasty Prostheses.** The purpose of this research is to assess modularity-related factors — humeral head size, taper geometry/design, materials, moment of inertia/flexural rigidity — in retrieved ATSA and HA implants to evaluate clinical variables and radiographic outcomes associated with in-vivo implant damage.	$ 3,000	$ 3,000

Grants and Contracts Report for Period July 1 - August 31, 2020

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Stephen Kent OU Incubator	Grand Valley State University/MEDC	**Business Accelerator Fund-Client Engagement, GryphonHR.** The objective of this project is to make accelerator services available statewide, make services available to high priority companies in regions, share accelerator best practices statewide, build lasting collaborations, and create jobs to catalyze multiplier effect.	$ 8,700	$ 554,092
Sergey Golovashchenko Department of Mechanical Engineering	Forging Foundation FIERF	**Method of Measuring Friction Conditions in Production Forging Dies.** The objective of this project is to develop the methodology of measuring friction conditions in production cold forging dies and perform the initial feasibility study for one forging die dedicated to forging of shafts.	$ 10,000	$ 10,000
Lawrence Herriman Macomb-OU Incubator	Grand Valley State University/ MEDC	**Accelerator Development Funds-Discretionary.** The objective for this project is to make accelerator services available statewide, make services available to high priority companies in regions, share accelerator best practices statewide, build lasting collaborations, and create jobs to catalyze multiplier effect.	$ 30,000	$ 270,000

Grants and Contracts Report for Period July 1 - August 31, 2020

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Stephen Kent OU Incubator	Grand Valley State University/ MEDC	**Accelerator Development Funds-Discretionary.** The objective for this project is to make accelerator services available statewide, make services available to high priority companies in regions, share accelerator best practices statewide, build lasting collaborations, and create jobs to catalyze multiplier effect.	$ 30,000	$ 270,000
Louis Villa Diaz Department of Biological Sciences	National Science Foundation	**Regulation of Self-Renewal of Pluripotent Stem Cells by Intern Signaling.** Our long-term objective of this research is to understand the molecular mechanisms that regulate their decision to commit in self-renewal or to go in to differentiation. We propose that signaling initiated by the transmembrane protein integrin alpha6 can prevent the nuclear accumulation of transcription factors associated with cell differentiation, and therefore sustain self-renewal.	$ 550,178	$ 550,178
David Szlag Department of Chemistry	Aquasight LLC	**Detection of COVID-19 in Sewage.** The goal of this research is to test sewage samples provided by Aquasight in accordance with Michigan State University testing protocols and procedures for sewer shed methods optimization and standardization.	$ 30,000	$ 30,000

Grants and Contracts Report for Period July 1 - August 31, 2020

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Xiangqun Zeng Department of Chemistry	National Science Foundation	**Collaborative Research: SitS: Integrating Novel Greenhouse Gas Sensor Technology with Mechanistic Modeling to Improve Projections of Arctic Soil Responses to Climate Warming and Fire.** The goal of this research is to understand how the heterogeneous physical effects of tundra fire affect plant-soil-microbe interactions within patches of different burn severity over a seasonal timescale, and how these responses aggregate to govern tundra C cycling dynamics at the plot- to landscape-scale are poorly understood.	$ 388,403	$ 388,403
Julian Rrushi Department of Computer Science and Engineering	Fortinet	**Signature-Based Detector of Network Attacks on Industrial Control Systems.** This project will focus on research and developing adequate approaches to testing and validation of the existing signatures of the Fortinet product.	$ 46,984	$ 93,848
Martha Escobar Department of Psychology	Tuskegee University/NSF	**NSF INCLUDES DDLP: The Alabama Alliance for an Inclusive Middle Grades Computer Science Preparation through Makerspaces in the Alabama Black Belt Region.** This pilot project will develop, implement, and assess a prototype for computer science education for middle schools in the Alabama Black Belt region.	$ 7,000	$ 21,994

Grants and Contracts Report for Period July 1 - August 31, 2020

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Edward Rohn Department of Interdisciplinary Health Science	University of Michigan/DOD	**Neurogenic Bowel and Bladder Management after Spinal Cord Injury: Examining Factors Involved in Successful Decision Making Processes.** This research is designed to explore how people with spinal cord injuries make decisions about their bladder and bowel management, including things they take into consideration in selecting management methods, factors in their lives that might influence their decisions, and the outcomes of those decisions.	$ 55,123	$ 104,404
Lawrence Herriman Macomb-OU Incubator	State of Michigan	**Michigan Strategic Fund Grant Agreement, Macomb-OU Inc.** This funding will be used to support small businesses in Oakland County.	$ 98,663	$ 541,200
		Total Awards	**$ 1,592,201**	**$ 3,802,346**