

Agendum  
Oakland University  
Board of Trustees Formal Session  
December 9, 2010

**ACCEPTANCE OF GRANTS AND CONTRACTS TO OAKLAND UNIVERSITY  
FOR THE PERIOD OF AUGUST 1, 2010 THROUGH SEPTEMBER 30, 2010**

**A Recommendation**

1. **Division and Department:** Academic Affairs/Office of Grants, Contracts and Sponsored Research

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 August 1, 2010 through September 30, 2010.

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.

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7. **University Reviews/Approvals:** All grants and contracts are reviewed by the Office of Grants, Contracts and Sponsored Research 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:**

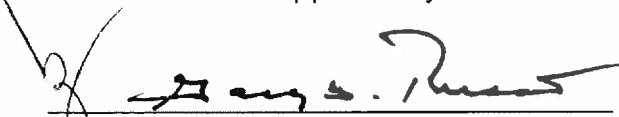
RESOLVED, that the Board of Trustees accept grants and contracts to Oakland University identified in the attached Grants and Contracts Report, Attachment A, for the period of August 1, 2010 through September 30, 2010.

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

Submitted to the President  
on Nov 8, 2010 by

  
Virinder K. Moudgil  
Senior Vice President for  
Academic Affairs and Provost

Recommended on 11/9, 2010  
to the Board for approval by

  
Gary D. Russi  
President

<b>Principal Investigator</b>	<b>Awarding Agency</b>	<b>Title and Project Abstract</b>	<b>Award Amount</b>	<b>Total Award All Years</b>
Charles Lindemann Department of Biological Sciences	National Science Foundation	<b>An Investigation of the Mechanism that Produces Rhythmic Beating in Cilia and Flagella.</b> <i>The main objective of this project is to gather vital physical information about the flagellum and to incorporate it into a theoretical and computer model of flagellar mechanics.</i>	\$ 203,160	\$ 422,172
Andrei Slavin Department of Physics	U.S. Army	<b>Analytical Model of Microwave Generation in Magnetic Nano-Oscillators Driven by Spin-Polarized Current.</b> <i>The goal of this project is further development of deterministic theory of spin-torque nano-oscillator (STNO) radiation and reception of electromagnetic waves in a free space, strip line, coplanar waveguide, and microwave resonator.</i>	\$ 95,000	\$ 95,000
Bradley Roth Department of Physics	National Institutes of Health	<b>Core Center in Quantitative Biology.</b> <i>The objective of this project is to improve quantitative biology at Oakland University.</i>	\$ 336,113	\$ 722,226
James Leidel Department of Facilities Management	DTE Energy	<b>Pilot for Emerging Lighting Technology (LED) at Oakland University.</b> <i>The goal of this project is to install and evaluate 100 plus LED and induction outdoor lighting fixtures as a pilot program with Detroit Edison Community Lighting.</i>	\$ 200,000	\$ 200,000
Amy Banes-Berceli Department of Biological Sciences	National Institutes of Health	<b>Physiological Role of Activation of the JAK/STAT Pathway in Hypertension.</b> <i>The goal of this project is to determine the role of the JAK/STAT pathway in hypertension and the development of disease-related vascular and renal complications.</i>	\$ 242,943	\$ 485,886
John Seeley Department of Chemistry	Foster-Miller	<b>Subcontract on Foster-Miller's Mobile Air Zone Extractor Project.</b> <i>The project involves characterization of existing materials for sampling atmospheric chemical compounds and develop new desorption approaches. This work will aid in the production of accurate and fast techniques for monitoring the chemical composition of the atmosphere.</i>	\$ 119,612	\$ 319,612

<b>Principal Investigator</b>	<b>Awarding Agency</b>	<b>Title and Project Abstract</b>	<b>Award Amount</b>	<b>Total Award All Years</b>
Douglas Wendell Department of Biological Sciences	National Institutes of Health	<b><i>DNA Markers for Fast Plants to Teach Scientific Thinking.</i></b> <i>The objective of this project is to develop DNA markers for rapid cycling Brassica rapa that can be used under the conditions of a typical undergraduate teaching lab, and lab modules to use these materials to teach scientific reasoning and molecular genetics in undergraduate courses.</i>	\$ 128,217	\$ 265,055
Andrei Slavin Department of Physics	National Science Foundation	<b><i>MWN Dynamically Controlled Artificial Magnonic Materials Based on Arrays of Nano-Sized Dots.</i></b> <i>This project involves further development, characterization, and investigation of dynamically controlled nano-structured artificial materials - two dimensional magnonic crystals based on arrays of interacting nano-sized magnetic dots.</i>	\$ 220,000	\$ 220,000
Lianxiang Yang Department of Mechanical Engineering	Intelligent Automation, Incorporated	<b><i>MLI-HS-Digital Image Correlation System.</i></b> <i>The objective of this project is to develop an innovative High-Speed Digital Image Correlation System for full-field, high temperature strain and displacement measurement.</i>	\$ 225,000	\$ 225,000
Ka C. Cheok Department of Electrical and Computer Engineering	U.S. Army	<b><i>Research Engineering and Apprentice Program (REAP).</i></b> <i>The goal of this project is to provide a cooperative education program which will afford hands-on experience in research and development activities to high school students who may choose to enter and complete basic education in science and engineering.</i>	\$ 2,600	\$ 2,600
Lorenzo Smith Department of Mechanical Engineering	U.S. Army	<b><i>Research Engineering and Apprentice Program (REAP).</i></b> <i>The goal of this project is to provide a cooperative education program which will afford hands-on experience in research and development activities to high school students who may choose to enter and complete basic education in science and engineering.</i>	\$ 2,600	\$ 2,600
David Spencer SmartZone, Office of the President	Michigan Economic Development Corporation	<b><i>Macomb Incubator Facility Maintenance and Renovation.</i></b> <i>The objective of this project is to undertake improvement activities to the Macomb SmartZone Business Incubator.</i>	\$ 100,000	\$ 100,000

<b>Principal Investigator</b>	<b>Awarding Agency</b>	<b>Title and Project Abstract</b>	<b>Award Amount</b>	<b>Total Award All Years</b>
Hongwei Qu Department of Electrical and Computer Engineering	National Science Foundation	<b>Major Research Instrumentation (MRI) Acquisition of a Scanning Electron Microscope.</b> <i>Funding from the National Science Foundation will be used to acquire a scanning electron microscope.</i>	\$ 147,845	\$ 147,845
Lorenzo Smith Department of Mechanical Engineering	Battelle	<b>Develop and Validate Numerical Modeling Results for Electrohydraulic Forming.</b> <i>The purpose of this work is to verify and further develop a finite element model of the EHF process for sheet metal.</i>	\$ 70,001	\$ 149,925
Bradley Roth Department of Physics	Henry Ford Health System	<b>Graduate Student Support for Medical Physics Research at Henry Ford Hospital.</b> <i>The objective of this funding is to support Biomedical Sciences. This support allows many of our best and brightest graduate students to work in the world-class laboratory of Distinguished Professor Michael Chopp and his colleagues, many of whom are adjunct faculty in our Physics department.</i>	\$ 25,324	\$ 88,352
<b>Total</b>			<b>\$ 2,118,415</b>	<b>\$ 3,446,273</b>