

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount
Susmit Suvas Department of Biological Sciences	Midwest Eye Bank	<i>Role of HIF-1alpha in Herpes Simplex Virus-1 induced Corneal Angiogenesis.</i> The objective for this research is to determine the amounts of HIF-1 α protein in the cornea at different time-points post ocular HSV-1 invection and determine the role of HIF-1 α in regulating the levels of pro- and anti-angiogenic molecules in the cornea before and after ocular HSV-1 infection.	\$ 15,000
Dao Qi Zhang Eye Research Institute	Midwest Eye Bank	<i>Dysfunction of the Retinal Ganglion Cells in Diabetes.</i> The goal of this research is to understand the mechanisms by which visual defects occur in diabetic retinopathy.	\$ 15,000
Cheryl Riley-Doucet School of Nursing	National Eczema Association	<i>Assessment of Autonomous Multisensory Intervention Device to Detect and Manage Nighttime Pruritus among Children with Atopic Dermatitis.</i> The objective of this research is to design, validate and conduct clinical tests of a medical device that is capable of physiological monitoring and multi-sensory intervention.	\$ 11,000
Brian Sangeorzan Department of Mechanical Engineering	Ford Motor Company	<i>Measurement of Piston Oil Jet Heat Transfer Coefficient.</i> The goal of this research is to measure the piston oil jet heat transfer coefficient in an effort to optimize the oil jet flow rate and minimize the parasitic pumping and friction losses.	\$ 33,000
Lorenzo Smith School of Engineering and Computer Science	Ford Motor Company	<i>Aluminum Enhanced Forming Limit Curves Phase 2.</i> The objective of this research is to determine experimentally the strain distribution corresponding to the onset of necking (failure) under plane strain conditions in tensile test specimens.	\$ 5,200
Lianxiang Yang Department of Mechanical Engineering	Chrysler LLC	<i>DIC FLD Determination on Trip-780 (USS).</i> The objective of this research is to use a State-of-Art Digital Image Correlation System to measure the sheet surface strain history of samples during FLD experiments.	\$ 4,000

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount
Jing Tang School of Engineering and Computer Science	National Science Foundation (NSF)	BRIGE: Magnetic Resonance Imaging Assisted Dynamic Positron Emission Tomography Imaging. <i>The research objective is to incorporate anatomical information, measured by magnetic resonance imaging, in positron emission tomography imaging to reduce statistical noise and improve spatial resolution.</i>	\$ 174,648
Chhabi Govind Department of Biological Sciences	National Institutes of Health (NIH)	Mechanisms of RSC Recruitment and its Role in Transcription. <i>The goal of this project is to investigate the mechanisms by which RSC, a chromatin remodeling complex, is recruited in vivo and define its role in stimulating transcription elongation.</i>	\$ 273,816
Gwendolyn McMillon Department of Reading and Language Arts	Michigan Department of Education (MDOE)	Title II, Part A(3) Improving Teacher Quality. <i>This project will provide opportunities for participants from prior projects to mentor teachers with five or less years of experience, as they acquire in-depth content knowledge in the area of English and Language and learn how to implement innovative, data-driven instruction that incorporates students' out-of-school literacy experiences.</i>	\$ 22,659
Anne Hranchook School of Nursing	Health Resources and Services Administration (HRSA)	Nurse Anesthetist Traineeship. <i>The purpose of this project is to provide graduate nurse anesthesia students with traineeship support for the cost of tuition of the Oakland University-Beaumont Graduate Program of Nurse Anesthesia.</i>	\$ 28,504
George Martins Department of Physics	Oak Ridge National Laboratory (ORNL)	Analytical Development of the FLEX Approximation DOE. <i>This project goal is to develop implementations of multi-band FLEX equations to understand a new family of High Tc Superconductors.</i>	\$ 25,030
Manohar Das Department of Electrical and Computer Engineering	University of Minnesota	A Nationwide Consortium of Universities to Revitalize Electric Power. <i>The object of this project is to revise and revitalize the energy/power engineering courses offered by the Department of Electrical and Computer Engineering by adopting the curricula developed by the University of Minnesota.</i>	\$ 8,333

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount
Andrei Slavin Department of Physics	Yale University (Prime Awardee of U.S. Department of Defense)	Coherent Information Transduction Between Photons, Magnons and Electric Charge Carriers. <i>This project will focus on the investigation of information transmission, storage and processing in multi-component systems which utilize the coherent interconversion between photons, magnons and electric charge carriers.</i>	\$ 72,635
Michael Polis Department of Industrial and Systems Engineering	United States Army Research Office (USARO)	U.S. Army Research and Education Apprenticeship Program (REAP) - American Content of Passenger Vehicles. <i>The goals of this project are to identify the elements used to calculate "American Content" of passenger vehicles, and to see if changing either the weighting of these elements or the addition on other elements will significantly change the ranking of the vehicles.</i>	\$ 2,600
Krzystof Kobus Department of Mechanical Engineering	United States Army Research Office (USARO)	U.S. Army Research Education and Apprenticeship Program (REAP) - Clean Energy Research. <i>REAP encourages high school students to pursue careers in math, science and technology through hands-on experience in research and development. A high school student will spend several weeks in energy efficiency and clean energy research.</i>	\$ 2,600
Lianxiang Yang Department of Mechanical Engineering	Auto/Steel Partnership	AS-7001 Nonlinear Strain Paths: Create Database and Uniaxial Testing. <i>The goal of this project is to enable more reliable determination of manufacturability and product performance to take better advantage of light-weighting opportunities through design optimization.</i>	\$ 25,000
Lorenzo Smith School of Engineering and Computer Science	Chrysler LLC	Seed Funding for CLIC-Form Research and Development 2012-2013. <i>This funding will support the continuation of teaching and research through the CLIC-Form Program for the 2012-2013 period.</i>	\$ 110,624
Nessan Kerrigan Department of Chemistry	National Science Foundation (NSF)	Catalytic Asymmetric Heterodimerization of Detenes and Applications. <i>The goal of this project is to develop an asymmetric synthetic methodology and apply it to the synthesis of cinnabaramide A and the B ring of taxol.</i>	\$ 300,000

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount
Frank Giblin Eye Research Institute	National Institutes of Health (NIH)	<i>Proteins of Normal and Cataractous Lenses.</i> <i>The objective of this project is to evaluate the role of oxidative stress in the development of human nuclear cataract, the most common type of lens opacity in older adults, and the type most likely to require surgery.</i>	\$ 431,377
Total			\$ 1,561,026