

**SUBMITTED BY:**

**STEPHEN M. LANIER, PH.D.  
VICE PRESIDENT FOR RESEARCH**

**NEW RESEARCH AWARDS  
FOURTH QUARTER – FY 2018**

**COLLEGE OF EDUCATION**

**Administration & Organization**

**Principal Investigator:** Sarah Winchell Lenhoff, Ph.D.

**Sponsor:** Skillman Foundation

**Title:** Detroit Education Research Partnership

**Anticipated Total:** \$198,500

**Effective Dates:** 9/1/2018 – 8/31/2019

**Kinesiology, Health, and Sports Studies**

**Principal Investigator:** Jeanne M. Barcelona, Ph.D.

**Sponsor:** William Beaumont Hospital

**Title:** Dearborn SHINES for Healthy Kids Program

**Anticipated Total:** \$115,510

**Effective Dates:** 8/8/2018 – 8/31/2019

**COLLEGE OF ENGINEERING**

**Biomedical Engineering**

**Principal Investigator:** Liying Zhang, Ph.D.

**Sponsor:** U.S. Navy - Navy

**Title:** A Prospective Study of the Effects of Repetitive Low Level Blast Exposure on Fitness for Duty in SOCOM Warriors

**Anticipated Total:** \$901,194

**Effective Dates:** 9/30/2018 – 9/29/2021

**Civil Engineering**

**Principal Investigator:** Esref Emrah Kazan, Ph.D.

**Sponsor:** U.S. Department of Labor - DOL

**Title:** Silica Exposure and Safety in Construction Industry

**Anticipated Total:** \$142,496

**Effective Dates:** 9/30/2018 – 9/30/2019

**Principal Investigator:** Shawn Patrick McElmurry, Ph.D.

**Sponsor:** National Science Foundation - NSF

**Title:** Collaborative Research: CRISP 2.0 Type 2: Water and Health Infrastructure Resilience and Learning (WHIRL)

**Anticipated Total:** \$1,570,000

**Effective Dates:** 9/1/2018 – 7/31/2022

## Computer Science

**Principal Investigator:** Weisong Shi, Ph.D.  
**Sponsor:** National Science Foundation - NSF  
**Title:** NSF Computer Systems Research (CSR) Program 2018 PI Meeting  
**Anticipated Total:** \$160,040  
**Effective Dates:** 8/1/2018 – 7/31/2019

**Principal Investigator:** Weisong Shi, Ph.D.  
**Sponsor:** MIT Lincoln Laboratory  
**Title:** Representative Public Safety Video Testbed  
**Anticipated Total:** \$60,000  
**Effective Dates:** 9/1/2018 – 5/31/2019

**Principal Investigator:** Zichun Zhong, Ph.D.  
**Sponsor:** National Science Foundation - NSF  
**Title:** CHS: Small: High-Dimensional Euclidean Embedding for 4D Volumetric Shape with Multi-Tensor Field  
**Anticipated Total:** \$499,985  
**Effective Dates:** 8/15/2018 – 7/31/2021

## Engineering Technology

**Principal Investigator:** Yeau-Jian Liao, Ph.D.  
**Sponsor:** Macomb Community College  
**Title:** Resource Center for Advanced Automotive Technology (CAAT)  
**Anticipated Total:** \$113,584  
**Effective Dates:** 7/1/2018 – 6/30/2021

## Industrial & Manufacturing Engineering

**Principal Investigator:** Gary Witus, Ph.D.  
**Sponsor:** Stevens Institute of Technology  
**Title:** Systems Qualities (SQ) Tradespace and Affordability (SQOTA), Phase 7: 2018-2019  
**Anticipated Total:** \$56,250  
**Effective Dates:** 8/24/2018 – 8/23/2019

## COLLEGE OF LIBERAL ARTS AND SCIENCES

### Chemistry

**Principal Investigator:** Eduard Yurjev Chekmenev, Ph.D.  
**Sponsor:** National Cancer Institute - NCI  
**Title:** Magnetic Resonance Spectroscopy and Molecular Imaging of Metabolic Pathways in Cancer  
**Anticipated Total:** \$257,300  
**Effective Dates:** 9/1/2018 – 8/31/2020

**Principal Investigator:** Stanislav Groysman, Ph.D.  
**Sponsor:** American Chemical Society  
**Title:** Heterobimetallic Homogeneous Catalysts for CO Oxidation  
**Anticipated Total:** \$110,000  
**Effective Dates:** 9/1/2018 – 8/31/2020

**Principal Investigator:** Jeremy Jacob Kodanko, Ph.D.  
**Sponsor:** Ohio State University - OSU  
**Title:** Design of New Ru(II) Complexes to Control Excited State Reactivity  
**Anticipated Total:** \$209,064  
**Effective Dates:** 8/1/2018 – 6/30/2021

**Principal Investigator:** Federico Augusto Rabuffetti, Ph.D.  
**Sponsor:** Research Corporation for Science Advancement  
**Title:** Crystallochemical Principles of Energy Management in Solid-State Photoluminescent Materials  
**Anticipated Total:** \$100,000  
**Effective Dates:** 7/1/2018 – 6/30/2021

### Mathematics

**Principal Investigator:** Steven Marshall Kahn, Ph.D.  
**Sponsor:** Detroit Public Schools - DPS  
**Title:** WSU Math Corps Math Literacy and High School Readiness Program  
**Anticipated Total:** \$89,800  
**Effective Dates:** 8/15/2018 – 6/14/2019

**Principal Investigator:** Hengguang Li, Ph.D.  
**Sponsor:** National Science Foundation - NSF  
**Title:** Novel Finite Element Methods for Three-dimensional Anisotropic Singular Problems  
**Anticipated Total:** \$198,991  
**Effective Dates:** 8/1/2018 – 7/31/2021

**Principal Investigator:** Boris S. Mordukhovich, Ph.D.  
**Sponsor:** National Science Foundation - NSF  
**Title:** Advanced Research on Second-Order Variational Analysis with New Applications to Optimization, Control, and Practical Modeling  
**Anticipated Total:** \$239,975  
**Effective Dates:** 9/1/2018 – 8/31/2023

**Principal Investigator:** Gang George Yin, Ph.D.  
**Sponsor:** University of California, San Diego - UCSD  
**Title:** Reliable and optimal coordination of networked systems and action-based space trajectory generation/estimation  
**Anticipated Total:** \$116,633  
**Effective Dates:** 8/1/2018 – 8/31/2021

## Physics

**Principal Investigator:** Gil Paz, Ph.D.  
**Sponsor:** Simons Foundation  
**Title:** How Big is the Proton?  
**Anticipated Total:** \$84,914  
**Effective Dates:** 8/17/2018 – 5/15/2019

## Psychology

**Principal Investigator:** Marilyn Franklin, Ph.D.  
**Sponsor:** Children's Hospital of Michigan Foundation  
**Title:** Integrated Behavioral Health Care for General Pediatrics and Adolescent Medicine  
**Anticipated Total:** \$74,451  
**Effective Dates:** 6/15/2018 – 5/31/2019

## **DIVISION OF RESEARCH**

### Institute of Environmental Health

**Principal Investigator:** Douglas Mark Ruden, Ph.D.  
**Sponsor:** National Institutes of Health - NIH  
**Title:** Ruden ECHO Subcontract  
**Anticipated Total:** \$514,238  
**Effective Dates:** 9/1/2018 – 8/31/2023

### Institute of Gerontology

**Principal Investigator:** Vojko Kavcic, Ph.D.  
**Sponsor:** National Institutes of Health - NIH  
**Title:** Community-based approach to Early Identification of transitions to Mild Cognitive Impairment (MCI) and Alzheimer's Disease (AD) in African  
**Anticipated Total:** \$3,301,912  
**Effective Dates:** 7/1/2018 – 3/31/2023

**Principal Investigator:** Peter Alexander Lichtenberg, Ph.D.  
**Sponsor:** National Institute on Aging - NIA  
**Title:** Michigan Center for Urban African-American Aging Research  
**Anticipated Total:** \$259,847  
**Effective Dates:** 7/1/2018 – 6/30/2023

### Merrill Palmer Skillman Institute

**Principal Investigator:** Steven J. Ondersma, Ph.D.  
**Sponsor:** Henry Ford Health Systems - HFHS  
**Title:** SBI-tech Michigan: Optimizing SBI Implementation for high-risk alcohol among women of childbearing age  
**Anticipated Total:** \$149,226  
**Effective Dates:** 9/30/2018 – 9/29/2022

**Principal Investigator:** Valerie Ann Simon, Ph.D.  
**Sponsor:** National Institute of Child Health and Human Dev. - NICHD  
**Title:** A Virtual Reality Paradigm for Assessing the Interpersonal Dynamics of Violence Exposure  
**Anticipated Total:** \$423,827  
**Effective Dates:** 7/6/2018 – 6/30/2020

**Principal Investigator:** Ann Michele Stacks, Ph.D.  
**Sponsor:** U.S. Administration for Children and Families - ACF  
**Title:** Recognizing, Reflecting, and Responding to Infant/Toddler Cues: An Integrated Parent-Teacher Intervention to Support Social-Emotional  
**Anticipated Total:** \$496,982  
**Effective Dates:** 9/30/2018 – 9/30/2020

**EUGENE APPLEBAUM COLLEGE OF PHARMACY AND HEALTH SCIENCES**  
**Pharmaceutical Science**

**Principal Investigator:** Chen Fei, Ph.D.  
**Sponsor:** National Institutes of Health - NIH  
**Title:** Arsenic-induced miRNA-199 and miRNA-214 deplete mitochondrial DNA for the generation of cancer stem-like cells  
**Anticipated Total:** \$1,317,815  
**Effective Dates:** 9/1/2018 – 5/31/2023

**Principal Investigator:** Arun Kunchithapatham Iyer, Ph.D.  
**Sponsor:** U.S. Army Medical Research Acquisition Activity - USAMRAA  
**Title:** Tumor stroma penetrating oligomicelles containing combination payload for reversal of drug resistance and immune modulation in kidney cancer  
**Anticipated Total:** \$611,475  
**Effective Dates:** 9/1/2018 – 8/31/2021

**Pharmacy Practice**

**Principal Investigator:** Kyle Jon Burghardt, Pharm.D.  
**Sponsor:** National Institute of Diabetes Digestive Kidney Dis. - NIDDK  
**Title:** Acutely Induced Insulin Resistance by Antipsychotic Medication in Healthy Volunteers: Impact of Skeletal Muscle Epigenomic and Proteomic  
**Anticipated Total:** \$675,168  
**Effective Dates:** 8/1/2018 – 7/31/2022

**GRADUATE SCHOOL**

**Principal Investigator:** Todd Alan Leff, Ph.D.  
**Sponsor:** National Institute on Aging - NIA  
**Title:** Does Glycine Catabolism Play a Role in Age Related Metabolic Disease  
**Anticipated Total:** \$406,886  
**Effective Dates:** 8/15/2018 – 6/30/2020

**Principal Investigator:** Ambika Mathur, Ph.D.  
**Sponsor:** University of Detroit Mercy  
**Title:** ReBUILD Detroit (Research Enhancement for BUILDing Detroit)  
**Anticipated Total:** \$732,926  
**Effective Dates:** 7/1/2018 – 11/30/2018

**Principal Investigator:** Ambika Mathur, Ph.D.  
**Sponsor:** State of Michigan  
**Title:** KCP FFF  
**Anticipated Total:** \$103,735  
**Effective Dates:** 8/1/2018 – 12/31/2018

**LAW SCHOOL**  
**Law Instruction Units**

**Principal Investigator:** Peter Joseph Hammer, Ph.D.  
**Sponsor:** Ford Foundation  
**Title:** DEAL Support Grant  
**Anticipated Total:** \$227,500  
**Effective Dates:** 9/1/2018 – 8/31/2019

**PROVOST & VICE PRESIDENT FOR ACADEMIC AFFAIRS**  
**Center for Urban Studies**

**Principal Investigator:** Thomas Lyke Thompson, Ph.D.  
**Sponsor:** Michigan Department of Health and Human Services  
**Title:** AmeriCorps Program for Overdose Prevention and Response  
**Anticipated Total:** \$100,000  
**Effective Dates:** 9/1/2018 – 9/30/2019

**Office of the VP for Academic Affairs**

**Principal Investigator:** Ahmad Ezzeddine, Ph.D.  
**Sponsor:** Schoolcraft College  
**Title:** Schoolcraft College PTAC  
**Anticipated Total:** \$142,000  
**Effective Dates:** 7/1/2018 – 6/30/2019

**Principal Investigator:** Dawn Suzanne Medley, Ed.S.  
**Sponsor:** Association of Public and Land-Grant Universities  
**Title:** Project Degree Completion  
**Anticipated Total:** \$55,400  
**Effective Dates:** 8/1/2018 – 7/31/2019

## **SCHOOL OF MEDICINE**

### **Anatomy**

**Principal Investigator:** Linda D. Hazlett, Ph.D.

**Sponsor:** National Eye Institute - NEI

**Title:** Core Grant for Vision Research

**Anticipated Total:** \$495,031

**Effective Dates:** 9/1/2018 – 8/31/2019

### **Center Molecular Medicine/Gene**

**Principal Investigator:** Francesca Luca, Ph.D.

**Sponsor:** National Institutes of Health - NIH

**Title:** Functional Characterization of the Genetic and Environmental Determinants of Complex Traits

**Anticipated Total:** \$313,658

**Effective Dates:** 9/1/2018 – 5/31/2022

### **Emergency Medicine**

**Principal Investigator:** John Michael Wilburn, M.D.

**Sponsor:** Merck Sharp Dohme Corporation

**Title:** A Randomized Parallel-Group, Placebo-Controlled, Double-Blind, Event-Driven, Multi-Center Pivotal Phase III Clinical Outcome Trial of Efficacy and Safety of the Oral sGC Stimulator Vericiguat in Subjects

**Anticipated Total:** \$173,154

**Effective Dates:** 8/14/2018 – 1/23/2020

### **Family Medicine**

**Principal Investigator:** Youcheng Liu, M.D., Sc.D.

**Sponsor:** Centers for Disease Control and Prevention - CDC

**Title:** Assessment of Elastomeric Respirators in Healthcare Delivery Settings

**Anticipated Total:** \$392,130

**Effective Dates:** 9/1/2018 – 8/31/2020

**Principal Investigator:** Dawn Philips Misra, Ph.D.

**Sponsor:** National Institute of Nursing Research - NINR

**Title:** Paternal Role in Adverse Birth Outcomes in Black Families

**Anticipated Total:** \$1,836,960

**Effective Dates:** 9/3/2018 – 6/30/2022

## Internal Medicine

**Principal Investigator:** Sorabh Dhar, M.D.

**Sponsor:** Veterans Administration - VA

**Title:** Real-world Clinical Use of Ceftolozane/Tazobactam for the Treatment of Gram-Negative Infections in Northeast Ohio and Southeast Michigan

**Anticipated Total:** \$64,387

**Effective Dates:** 7/1/2018 – 12/31/2019

**Principal Investigator:** Dana G. Kissner, M.D.

**Sponsor:** Cystic Fibrosis Foundation

**Title:** Care Center Grant

**Anticipated Total:** \$68,420

**Effective Dates:** 7/1/2018 – 6/30/2019

**Principal Investigator:** Li Li, Ph.D.

**Sponsor:** National Heart, Lung and Blood Institute - NHLBI

**Title:** The Regulatory Roles of Nuclear SM22 in Smooth Muscle Phenotypic Modulation

**Anticipated Total:** \$2,069,516

**Effective Dates:** 9/1/2018 – 6/30/2022

## Microbiology, Immunology & Biochemistry/Cardiovascular Research Institute

**Principal Investigator:** Allen Jay Rosenspire, Ph.D.

**Sponsor:** National Institute of Environmental Health Sciences - NIEHS

**Title:** Understanding the connection between exposure to mercury-immunity and tolerance in B cells

**Anticipated Total:** \$2,240,192

**Effective Dates:** 9/1/2018 – 7/31/2023

## Obstetrics/Gynecology

**Principal Investigator:** Chaur-Dong Hsu, M.D.

**Sponsor:** National Institutes of Health - NIH

**Title:** Continuation of Wayne State University's Successful Development of Physician-Scientists as Independent Researchers in the Area of Women's Reproductive Health.

**Anticipated Total:** \$163,049

**Effective Dates:** 7/1/2018 – 6/30/2019

## Oncology

**Principal Investigator:** Jennifer L. Beebe-Dimmer, M.P.H., Ph.D.

**Sponsor:** University of Southern California - USC

**Title:** Research on Prostate Cancer in Men of African Ancestry: Defining the Roles of Genetics, Immunity and Stress (RESPOND) Study

**Anticipated Total:** \$142,709

**Effective Dates:** 7/5/2018 – 6/30/2019



**Principal Investigator:** Larry H. Matherly, Ph.D.  
**Sponsor:** National Institutes of Health - NIH  
**Title:** Training Program in the Biology of Cancer  
**Anticipated Total:** \$268,818  
**Effective Dates:** 9/1/2018 – 8/31/2019

**Principal Investigator:** Nerissa Therese Viola-Villegas, Ph.D.  
**Sponsor:** National Institutes of Health - NIH  
**Title:** Delineating Functional Immunity via Image-Guided PET  
**Anticipated Total:** \$566,226  
**Effective Dates:** 7/1/2018 – 6/30/2023

### Pathology

**Principal Investigator:** Rafael A. Fridman, Ph.D.  
**Sponsor:** U.S. Army Medical Research Acquisition Activity - USAMRAA  
**Title:** Disrupting Collagen-Mediated Pro-Survival Pathways in Pancreatic Cancer  
**Anticipated Total:** \$490,258  
**Effective Dates:** 8/1/2018 – 7/31/2020

### Pediatrics

**Principal Investigator:** Thomas Joseph Forbes, M.D.  
**Sponsor:** Children's Hospital of Michigan Foundation  
**Title:** Development of Pediatric Device Modules for FDA Regulatory Post Approval Studies  
**Anticipated Total:** \$112,898  
**Effective Dates:** 7/1/2018 – 6/30/2019

**Principal Investigator:** Nirupama Kannikeswaran, M.D.  
**Sponsor:** Children's Hospital of Michigan Foundation  
**Title:** Predictors of Failure of High Flow Nasal Cannula Oxygen Therapy in Children with Bronchiolitis  
**Anticipated Total:** \$53,630  
**Effective Dates:** 7/18/2018 – 12/31/2019

**Principal Investigator:** Tej K. Mattoo, M.D.  
**Sponsor:** Children's Hospital of Michigan Foundation  
**Title:** Evaluation of body water status in children with hypertension by bioelectrical impedance analysis testing  
**Anticipated Total:** \$62,500  
**Effective Dates:** 7/1/2018 - 6/30/2019

**Principal Investigator:** Sureyya Savasan, M.D.  
**Sponsor:** Children's Hospital of Michigan Foundation  
**Title:** Identification and Significance of Leukemic Sub-clones including Leukemia Stem Cells in Childhood Acute Leukemias  
**Anticipated Total:** \$52,729  
**Effective Dates:** 7/18/2018 – 6/30/2019

**Principal Investigator:** Usha Sethuraman, M.D  
**Sponsor:** Children's Hospital of Michigan Foundation  
**Title:** Impact of an Electronic Alert System on screening for suspected physical abuse in children less than 2 years in the Emergency Department  
**Anticipated Total:** \$67,180  
**Effective Dates:** 7/27/2018 – 12/31/2019

### Pharmacology

**Principal Investigator:** Karin List, Ph.D.  
**Sponsor:** National Cancer Institute - NCI  
**Title:** Tumor-promoting functions of Tmprss13 in breast cancer progression  
**Anticipated Total:** \$1,672,170  
**Effective Dates:** 7/15/2018 – 6/30/2023

### Physiology

**Principal Investigator:** Charles S. Chung, Ph.D.  
**Sponsor:** American Heart Association/National Center - AHA  
**Title:** Mechanism and Diagnosis of Diastolic Dysfunction (and HFpEF) via Strain Rate-Dependent Impaired Relaxation  
**Anticipated Total:** \$300,000  
**Effective Dates:** 7/1/2018 – 6/30/2021

**Principal Investigator:** Jason H. Mateika, Ph.D.  
**Sponsor:** National Institutes of Health - NIH  
**Title:** Mild intermittent hypoxia and CPAP: A multi-pronged approach to treat sleep apnea in intact and spinal cord injured humans.  
**Anticipated Total:** \$385,000  
**Effective Dates:** 9/25/2018 – 8/31/2019

**Principal Investigator:** Robert John Wessells, Ph.D.  
**Sponsor:** National Institute on Aging - NIA  
**Title:** Octopamine controls adaptation to endurance exercise in Drosophila  
**Anticipated Total:** \$1,694,000  
**Effective Dates:** 9/30/2018 – 5/31/2023

### Psychiatry

**Principal Investigator:** Alireza Amirsadri, M.D.  
**Sponsor:** Michigan Health Endowment Fund  
**Title:** Team Based Telemedicine  
**Anticipated Total:** \$441,686  
**Effective Dates:** 9/1/2018 – 8/31/2020

**Principal Investigator:** Mark K. Greenwald, Ph.D.

**Sponsor:** Kids Kicking Cancer

**Title:** Heroes Circle Opioid Project 2018

**Anticipated Total:** \$90,318

**Effective Dates:** 8/1/2018 – 6/30/2019

**Principal Investigator:** Mark K. Greenwald, Ph.D.

**Sponsor:** National Institute on Drug Abuse - NIDA

**Title:** Opioid/benzodiazepine Polydrug Abuse Integrating Research on Mechanisms Treatment and Policies

**Anticipated Total:** \$203,023

**Effective Dates:** 9/30/2018 – 8/31/2020

**Principal Investigator:** Tanja Jovanovic, Ph.D.

**Sponsor:** University of North Carolina at Chapel Hill

**Title:** Longitudinal Assessment of Post Traumatic Syndromes

**Anticipated Total:** \$101,472

**Effective Dates:** 8/6/2018 – 7/31/2019

### **Radiation Oncology**

**Principal Investigator:** Jacob M. Burmeister, Ph.D.

**Sponsor:** Henry Ford Health Systems - HFHS

**Title:** Quantification and Management of Cardiac Motion in Radiation Therapy (Eric Morris)

**Anticipated Total:** \$52,062

**Effective Dates:** 8/17/2018 – 8/16/2019

**Principal Investigator:** Jacob M. Burmeister, Ph.D.

**Sponsor:** Henry Ford Health Systems - HFHS

**Title:** Accurate Detection, Segmentation, Staging and Treatment Response of Cancer Treatment from Multiparametric MRI Images with Artificial Intelligence (Eric Carver)

**Anticipated Total:** \$52,062

**Effective Dates:** 8/17/2018 – 8/16/2019

### **Radiology**

**Principal Investigator:** Ewart Mark Haacke, Ph.D.

**Sponsor:** National Institutes of Health - NIH

**Title:** The next generation of vascular imaging using contrast-enhanced MICRO MRI

**Anticipated Total:** \$728,405

**Effective Dates:** 9/30/2018 – 8/31/2019

**Principal Investigator:** Jiani Hu, Ph.D.

**Sponsor:** Henry Ford Health Systems – HFHS

**Title:** Interaction between lymphatic and vascular systems for waste clearance in brain

**Anticipated Total:** \$133,332

**Effective Dates:** 9/1/2018 – 5/31/2023

**SCHOOL OF SOCIAL WORK**

**Deans Office Social Work - Social Work Instruction Un**

**Principal Investigator:** Erin Bridget Comartin, Ph.D.

**Sponsor:** State of Michigan Department of Corrections

**Title:** SMART Reentry Evaluation

**Anticipated Total:** \$134,509

**Effective Dates:** 7/1/2018 – 12/31/2020

**Principal Investigator:** Sheryl Marie Pimlott-Kubiak, Ph.D.

**Sponsor:** Michigan Department of Health and Human Services

**Title:** Stepping Up Technical Assistance

**Anticipated Total:** \$350,000

**Effective Dates:** 7/1/2018 – 9/30/2018