

RESEARCH ANNUAL REPORT

TOGETHER, WE'LL
GUIDE THE FUTURE
OF TOMORROW'S
HEALTH CARE.

OFFICE OF RESEARCH AND SPONSORED PROGRAMS

July 1, 2016 - June 30, 2017

Historical Research Support and Activity Data

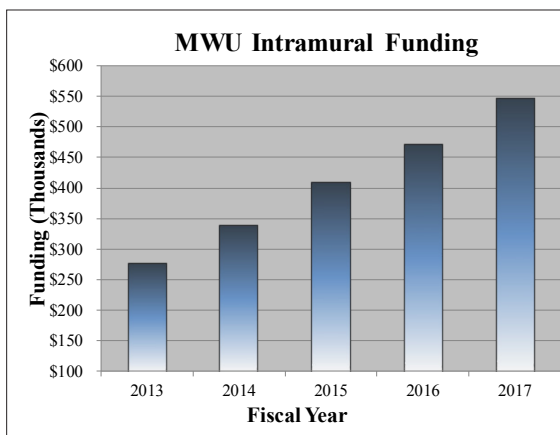
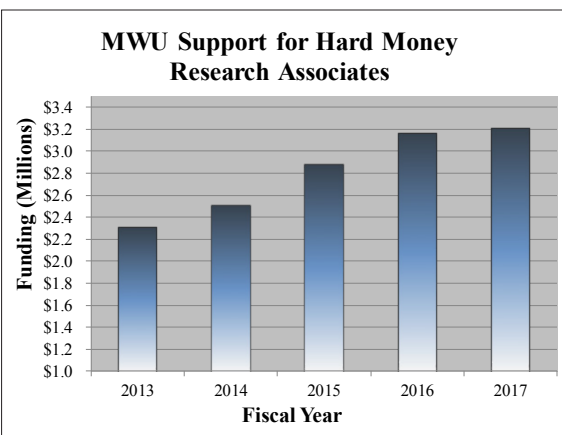
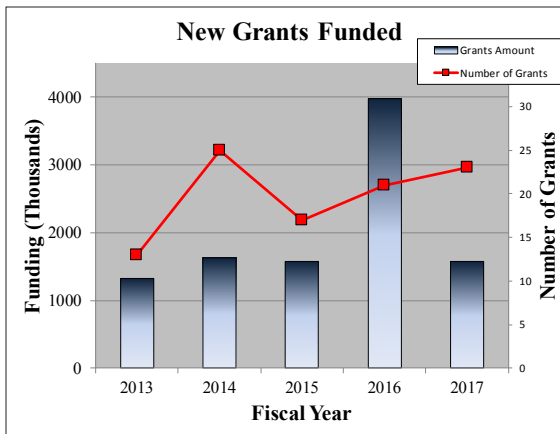
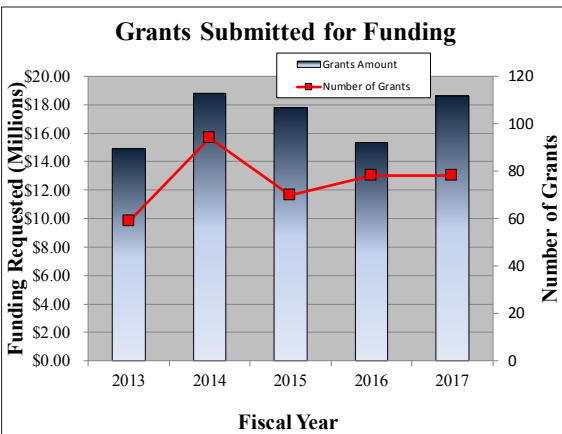
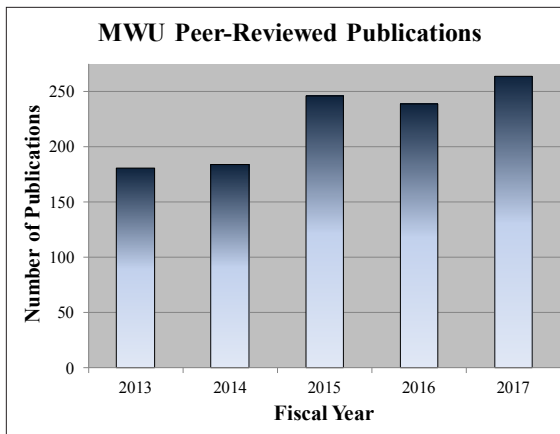
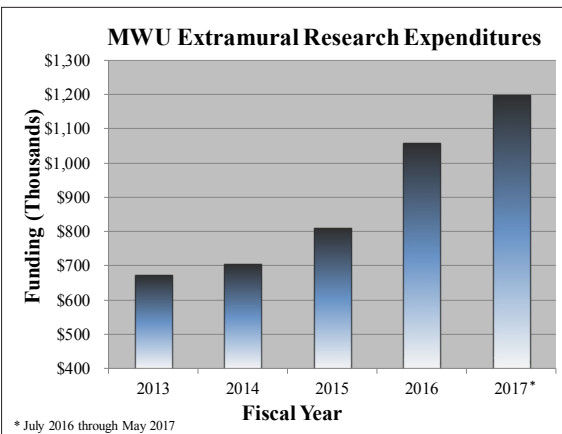
The Midwestern University (MWU) *Annual Research Report* demonstrates research achievements of which members of the MWU community should be proud. As you will see inside this report, support for research at MWU is growing. The graphs below show historical data over the last five years, highlighting MWU's research activity and support. THANK YOU to all of MWU's faculty members, research staff and students whose efforts have consistently strengthened MWU's research programs.



Theresa W. Fossum, DVM, PhD
Vice President of Research & Strategic Initiatives



James M. Woods, PhD
Director, Office of Research & Sponsored Programs



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Fast Research Facts 2016 - 2017

Support for Faculty Research

- All Midwestern University (MWU) faculty are in 100% “hard money” (university-funded) positions, where they are encouraged, but not dependent upon bringing in extramural funding;
- Recaptured Salary Incentive: Faculty who receive grants which support “hard money” salary positions can earn “additional compensation;”
 - MWU paid out \$68,694 in such incentives directly to faculty in fiscal year (FY) 2017;
- MWU provides “hard money” research technicians for faculty, including 54 Full Time Equivalents funded at \$3,235,847 for FY 2017;
- New faculty are provided start-up packages;
- Faculty can request capital research equipment through the university;
 - MWU purchased \$1,208,847 in capital research equipment in FY 2017;
 - Each campus requested and received a new confocal microscope within FY 2013 or FY 2014;
- Competitive intramural funding is available for faculty who actively seek extramural funding, including \$546,319 awarded in FY 2017;

Support for Student Research

- MWU makes a significant commitment to student research, demonstrated through the awarding of 86 fellowships at a total cost of \$377,200 in research stipends in FY 2018;
- MWU’s Research Days, held on each campus, had a total of 340 presentations in 2017 where almost all of these were by students engaged in research;
- MWU pays for high-quality poster printing costs for its students and faculty, including support of \$23,408 for printing research posters through the ORSP in FY 2017;
- MWU supports students to travel and present their research, including up to \$500 of support for first author students who have an abstract accepted at a national meeting: \$25,364 in FY 2017

Funding Success

- MWU’s extramural research expenditures for FY 2017 totaled \$1,346,039;
- MWU faculty have received more than 50 NIH grants through 2017, the majority of which have been R15 awards, but also include several R01, R21 and R03 awards;
- NSF & HRSA Grants
- Foundation Grants: American Heart Association, American Optometric Foundation, Leakey Foundation, Alzheimer’s Drug Discovery Foundation, National Association of Chain Drug Stores, Pharmaceutical Research & Manufacturers of America Foundation, etc.
- For-profit grants: Celleration, Contamac, Novo Nordisk, Hiossen, Sangart, etc.

Office of Research & Sponsored Programs (ORSP)

- MWU's ORSP handles both pre-award and post-award grant and contract submissions, including 78 proposals submitted in FY 2017 requesting over \$18,600,000;
- MWU's ORSP has received significant budget increases since 2008, allowing us to offer intramural funds to all colleges, and to offer the following full-time positions to support faculty research:
 - A *Senior Grants Specialist* and *Grants Specialist* to assist faculty with grant and budget preparation and submission;
 - *Research Administrators* on each campus to assist MWU's IACUC, IRB, Radiation Safety and Biosafety Committees;
 - A *Manager of Bio/Clinical Statistics* to assist with data management and statistical needs;
 - An ORSP Assistant Director and a *Research Compliance Specialist* to help ensure MWU performs research in a manner compliant with federal, state and MWU regulations;
- For faculty involved in animal research who are seeking extramural funding, the ORSP can waive animal per diem charges, including nearly \$104,000 of waived charges in FY 2017;
- In FY 2017, MWU's ORSP offered \$9,800 to support a Research Seminar Series where faculty can bring in experts in their field (departments typically supplement the ORSP honorarium);

Research Facilities

- In 2014 MWU completed a new Veterinary Classroom and Laboratory building on our Glendale, Arizona campus:
 - This building has 11,161 square feet of space dedicated to research;
 - The research-related costs of the building total \$10,017,270;
 - This brings the total cost of expenditures for research space on the Glendale campus, including our Foothills, Cholla and Cactus Wren buildings, to \$20,870,255;
 - Our Foothills Building includes a 2,920 square foot animal facility;
- In 2011 MWU completed construction of a new Science Hall on our Downers Grove campus:
 - This provides researchers with 104,789 net assignable square feet dedicated to research;
 - The research-related costs of the building totaled \$56,200,200;
 - This includes a 13,170 square foot animal facility which received full AAALAC accreditation in 2012;
- A new Institute for Healthcare Innovation™ clinical research center is being planned for the Glendale campus, which will add additional research space, anticipated in the coming year;

The Bottom Line

- Midwestern University's commitment to building and sustaining a vital research environment is genuine;
- Administrative support for research is very strong, because of a firm belief in the ingenuity of MWU faculty.

MULTIDISCIPLINARY EXTRAMURALLY SUBMITTED PROPOSALS

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Gadagkar, S. (CHS-GD) & Kreisler, R. (CVM)	CHS-GD & CVM	Multidisciplinary	Graduate Training in Bioinformatics Applications of Big Data	12/7/2016	\$274,271	NIH-R25 with a Subcontract to TGen	9/1/2017
*Hull, E. (CHS-GD) & Leyva, K. (AZCOM)	CHS-GD & AZCOM	Multidisciplinary	The Role of Gain-of-Function p53 Mutation in the Regulation of Subtypes Switching in the Adrenocortical Carcinoma SW13 Cell Line	6/26/2017	\$450,000	NIH-R15	7/1/2018
*Mathew, R. (CDMI) & Mitchell, J. (CDMA)	CDMI & CDMA	Multidisciplinary	Multifactorial Analysis of Dental Implant Sustainability: Retrieval Analysis, Clustering, Peri-implantitis and Pathways of Failure	6/5/2017	\$750,000	NIH-R01 Subcontract from the University of Illinois at Chicago	4/1/2018
Olsen, M. (CPG) & Woods, C. (IHI)	CPG & IHI	Multidisciplinary	Evaluation of Aspartyl (Asparaginy)-beta-Hydroxylase Expression in Canine Tumor and Blood Samples	8/17/2016	\$15,000	American Kennel Association	10/1/2016
Olsen, M. (CPG), Wong, V. (CVM) & Jones, T.B. (AZCOM)	CPG, CVM & AZCOM	Multidisciplinary	Evaluation of ASPH Inhibitor, Pharmacokinetics, Toxicity and Pharmacology	10/28/2016	\$150,000	NIH-R03	11/1/2017

TOTAL OF MULTIDISCIPLINARY EXTRAMURALLY SUBMITTED PROPOSALS: \$1,639,271

ARIZONA COLLEGE OF OPTOMETRY (AZCOPT): EXTRAMURALLY SUBMITTED PROPOSALS

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Kozlowski, M.	AZCOPT	Optometry	Evaluation of p21 Inhibitors for the Treatment of Age-related Macular Degeneration	2/23/2017	\$442,885	NIH-R15	9/1/2017

TOTAL OF AZCOPT EXTRAMURALLY SUBMITTED PROPOSALS: \$442,885

**ARIZONA COLLEGE OF OSTEOPATHIC MEDICINE (AZCOM):
EXTRAMURALLY SUBMITTED PROPOSALS**

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Al-Nakkash, L.	AZCOM	Physiology	Understanding Genistein's Mechanism(s) of Action to Improve Cardiac Function in a VCD-induced Model of Menopause	2/13/2017	\$154,000	American Heart Association	7/1/2017
*Al-Nakkash, L.	AZCOM	Physiology	Mechanistic Understanding of the Deficit in Intestinal Cl-Secretion in Diabetes Using Whole Jejunum Tissue and Enteroids and Pinpointing How Genistein Ameliorates This	6/22/2017	\$370,220	NIH-R15	7/1/2018
*Al-Nakkash, L., Broderick, T. & Plochocki, J.	AZCOM	Physiology, Anatomy	Diabetic Obesity Results in Cognitive Impairment: Evaluation of the Gut, Brain and Bone Effects in Response to Exercise and Genistein Treatment	5/15/2017	\$25,598 (includes a \$12,799 match from MWU)	Arizona Alzheimer's Consortium	7/1/2017
*Bae, N. & Swanson, M.	AZCOM	Biochemistry	Investigating the Difference Between Ape and Human GFAP Proteins Involved in Neurodegeneration	5/15/2017	\$9,300 (includes a \$4,650 match from MWU)	Arizona Alzheimer's Consortium	7/1/2017
Broderick, T.	AZCOM	Physiology	Oxytocin and Exercise in the Treatment of Diabetic Cardiomyopathy	2/5/2017	\$1,731,849	NIH-R01 with a Subcontract to Centre hospitalier de l'Université de Montréal	9/1/2017
Call, G.	AZCOM	Pharmacology	Development and Use of a Genetically-tractable Ischemia/Reperfusion Injury Model	7/26/2016	\$154,000	American Heart Association	1/1/2017
Haley, N.	AZCOM	Microbiology & Immunology	Epidemiology and Management of Endemic CWD in Farmed Elk Using Antemortem Rectal Biopsy	7/13/2016	\$452,515	USDA NIFA AFRI	1/1/2017
*Jentarra, G., Potter, P., Tullot, T., Kaufman, J., Vallejo, J., Jones, D. & Jones, T.B.	AZCOM	Biochemistry, Anatomy	The Role of Infection in the Development and Pathological Features of Alzheimer's Disease	5/15/2017	\$33,000 (includes a \$16,500 match from MWU)	Arizona Alzheimer's Consortium (AAC)	7/1/2017
Lee, A., Baab, K.L., Georgi, J., & VandenBrooks, J.M.	AZCOM	Anatomy & Physiology	MRI Consortium: Acquisition of a Large-volume Micro-CT System to Stimulate Research and Training in the American Southwest	1/11/2017	\$818,290	NSF	8/1/2017

AZCOM EXTRAMURALLY SUBMITTED PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Plochocki, J., Hall, M. & Rodriguez Sosa, J.R.	AZCOM	Anatomy	Evolution of Primate Soft Tissue Pelvic Anatomy	7/15/2016	\$11,580	The Leakey Foundation	2/1/2017
*Smith, H.	AZCOM	Anatomy	Evolutionary Morphology, Distribution, and Environmental Context for the Earliest Known North American Turtles: Paleontology from the Chinle Formation (Late Triassic), Petrified Forest National Park, Arizona	4/12/2017	\$4,635	Turtle Conservation Fund	9/1/2017
*Townsend, K.E.B.	AZCOM	Anatomy	Collaborative Research: After the Bridgerian Crash - An Integrated Analysis of Mammalian Paleocommunities and Paleocologies During the Middle Eocene	4/27/2017	\$78,320	National Science Foundation	7/1/2017
VandenBrooks, J.M.	AZCOM	Physiology	Elucidating the Role of Rhipicephalus sanguineus (the Brown Dog Tick) as a Vector for Rocky Mountain Spotted Fever (RMSF) Transmission in Arizona	3/15/2017	\$10,800	Morris Animal Foundation	3/15/2017

TOTAL OF AZCOM EXTRAMURALLY SUBMITTED PROPOSALS: \$3,854,107

CHICAGO COLLEGE OF OSTEOPATHIC MEDICINE (CCOM): EXTRAMURALLY SUBMITTED PROPOSALS

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Andrews, E.	CCOM	Anatomy	Vitamin D Deficiency and Stroke Recovery in the Rat	2/17/2017	\$154,000	American Heart Association	7/1/2017
*Andrews, E.	CCOM	Anatomy	The Role of Vitamin D in Ischemic Stroke Recovery	6/25/2017	\$433,737	NIH-R15	4/1/2018
Edwards, J.	CCOM	Pharmacology	Mechanisms of Cadmium-induced Dysglycemia	10/25/2016	\$446,697	NIH-R15	7/1/2017
*Fay, M.	CCOM	Pharmacology	MicroRNA Dysregulation and Function During Cadmium-induced Nephrotoxicity	6/25/2017	\$449,432	NIH-R15	4/1/2018
Fornaro, M.	CCOM	Anatomy	Therapeutic Effect of IRL-1620, Agonist of Endothelin B Receptor in a Murine Model of Spinal Cord Injury	11/1/2016	\$321,758	Wings for Life	7/1/2017

CCOM EXTRAMURALLY SUBMITTED PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Henderson, K.	CCOM	Physiology	Analytical Assessment of the Cranial Rhythmic Impulse	1/20/2017	\$8,000	American Association of Osteopathy	5/1/2017
Malaiyandi, L. & Dineley, K.	CCOM	Anatomy & Pharmacology	MRI: Acquisition of an Epifluorescence Microscope for Live-Cell Imaging at Midwestern University	1/11/2017	\$181,851	NSF	8/1/2017
*Swanson-Mungerson, M.	CCOM	Microbiology & Immunology	Investigation of Ibrutinib Efficacy in EBV-associated Lymphomas	6/16/2017	\$375,000	NIH-R21	4/1/2018
Tiwari, V.	CCOM	Microbiology & Immunology	3-O Sulfated Heparan Sulfate Requirement for HSV Infection in Zebrafish Model	7/5/2016	\$937,500	NIH-R01 Subcontract from the University of Illinois at Chicago	4/1/2017
*Tiwari, V.	CCOM	Microbiology & Immunology	Structure-function Analysis of Sulfated Heparan Sulfate During CMV Infection	6/25/2017	\$450,000	NIH-R15	4/1/2018

TOTAL OF CCOM EXTRAMURALLY SUBMITTED PROPOSALS: \$3,757,975

CHICAGO COLLEGE OF PHARMACY (CCP): EXTRAMURALLY SUBMITTED PROPOSALS

Investigator/s	College	Department	Proposal Title	Date	Total	Agency	Start Date
*Andurkar, S.	CCP	Pharmaceutical Sciences	Study of Beta Arrestin-2 Involvement in the Modulation of Morphine Analgesia and Tolerance by an Endothelin ETA Receptor Antagonist	6/25/2017	\$450,000	NIH-R15	4/1/2018
*Avedissian, S. (Scheetz, M., Mentor)	CCP	Pharmacy Practice	Assessing Gold Based Polymyxin B Nanoparticles for Pharmacokinetic and Pharmacodynamic Improvements	6/1/2017	\$53,317 (includes a \$13,317 match from MWU)	American College of Clinical Pharmacy with a Subcontract to Northwestern University	9/15/2017
Briyal, S.	CCP	Pharmaceutical Sciences	ET _B Receptor Mediated Neurogenesis in Alzheimer's Disease	8/29/2016	\$10,000	American Association of Colleges of Pharmacy	1/1/2017
Briyal, S.	CCP	Pharmaceutical Sciences	ET _B Receptor Mediated Neurogenesis in Alzheimer's Disease	10/25/2016	\$450,000	NIH-R15	7/1/2017
*Briyal, S.	CCP	Pharmaceutical Sciences	Defining the Mechanism of ET _B Receptor Mediated Neurogenesis and Synaptogenesis in Alzheimer's Disease	6/25/2017	\$450,000	NIH-R15	4/1/2018

CCP EXTRAMURALLY SUBMITTED PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
*Gilchrist, A. (Beer, J., CCOM '20)	CCP	Pharmaceutical Sciences	Examining the Role of Heterotrimeric G Proteins in HSV-1 Entry Into Human Corneal Epithelial Cells	5/31/2017	\$5,000	American Osteopathic Association	9/1/2017
Gulati, A.	CCP	Pharmaceutical Sciences	Toxicokinetics and Toxicity of Centhaquin in Dogs	9/5/2016	\$23,616	NIH-SBIR Subcontract from Pharmazz, Inc.	4/1/2017
Joshi, M.	CCP	Pharmaceutical Sciences	Stimuli Sensitive, Targeted Lipid Nanocarriers for the Treatment of Stroke	8/29/2016	\$10,000	American Association of Colleges of Pharmacy	1/1/2017
McLaughlin, M.	CCP	Pharmacy Practice	Factors Influencing Pharmacy Student Pursuit of Research During Pharmacy School	8/29/2016	\$7,500	American Association of Colleges of Pharmacy	1/1/2017
McLaughlin, M.	CCP	Pharmacy Practice	An Intelligent System for Real-Time Measurement and Promotion of ART Adherence	9/14/2016	\$2,032	Northwestern University	1/1/2017
Rhodes, N.	CCP	Pharmacy Practice	Defining the Role of Antibiotic Pharmacokinetic Exposure Profile on <i>Pseudomonas aeruginosa</i> Virulence Factor Expression and Clinical Outcomes in Pneumonia	10/12/2016	\$818,470	NIH-K23	7/1/2017
*Rhodes, N.	CCP	Pharmacy Practice	Evaluation of Durations of Pneumonia Treatment and Viable Pathogen Eradication	6/30/2017	\$20,000	Society of Infectious Diseases Pharmacists	10/1/2017
*Rhodes, N.	CCP	Pharmacy Practice	Evaluation of Durations of Pneumonia Treatment and Viable Pathogen Eradication	6/30/2017	\$30,000	Society of Infectious Diseases Pharmacists	10/1/2017
Scheetz, M.	CCP	Pharmacy Practice	Defining Neurotoxicity to Restore Susceptibility for Beta-Lactam Antibiotics	7/5/2016	\$1,870,200	NIH-R01	4/1/2017
Scheetz, M.	CCP	Pharmacy Practice	A Pilot Study to Define Colistin Population PK and Interrogate Renal TD	8/23/2016	\$32,400	Cystic Fibrosis Foundation	4/1/2017
Scheetz, M.	CCP	Pharmacy Practice	Pharmacologically Improved Polymyxin B via Nanoparticle Conjugation	1/5/2017	\$110,280	NIH-STTR Subcontract from Northwestern University	7/1/2017

CCP EXTRAMURALLY SUBMITTED PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Scheetz, M.	CCP	Pharmacy Practice	A Retrospective Study to Understand the Risk Factors/Drivers of "Inappropriate" Antimicrobial Use and the Performance Evaluation of a Clinical Decision Support Tool that Facilitates Prediction of Outbreaks of Inappropriate Antibiotic Use	3/30/2017	\$149,935	Merck Sharp & Dohme Corporation with a Subcontract to the University of Michigan and Wayne State University	8/1/2017
*Scheetz, M.	CCP	Pharmacy Practice	Pharmacologically Improved Polymyxin B Via Nanoparticle Conjugation to Improve Infectious Outcomes in Diabetic Patients	4/17/2017	\$344,821	American Diabetes Association	1/1/2018
*Scheetz, M.	CCP	Pharmacy Practice	Nanoparticle-Polymyxin B Conjugates for Treating Infections in CF Patients	4/17/2017	\$70,403	Cystic Fibrosis Foundation Subcontract from Northwestern University	12/1/2017
*Scheetz, M.	CCP	Pharmacy Practice	A Pilot Study to Define Colistin Population PK and Interrogate Renal TD	4/21/2017	\$32,400	Cystic Fibrosis Foundation Subcontract from Northwestern University	11/1/2017
*Scheetz, M.	CCP	Pharmacy Practice	Elucidation of an Informed Drug Dosing Scheme to Minimize Kidney Injury	6/25/2017	\$462,606	NIH-R15 with a Subcontract to Albany College	4/1/2018

TOTAL OF CCP EXTRAMURALLY SUBMITTED PROPOSALS: \$5,402,980

COLLEGE OF DENTAL MEDICINE ARIZONA (CDMA): EXTRAMURALLY SUBMITTED PROPOSALS

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Kramer, R.	CDMA	Dental	E. "Bud" Tarrson Dental School Community Leadership Award	11/11/2016	\$5,000	American Dental Association Foundation	1/1/2017

TOTAL OF CDMA EXTRAMURALLY SUBMITTED PROPOSALS: \$5,000

**COLLEGE OF HEALTH SCIENCES-DOWNERS GROVE (CHS-DG):
EXTRAMURALLY SUBMITTED PROPOSALS**

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Krzak, J.	CHS-DG	Physical Therapy	Effect of Functional Strengthening on Mobility, Activity, and Participation in Youth with Osteogenesis Imperfecta	1/27/2017	\$45,800	National Institute on Disability, Independent Living, and Rehabilitation Research Subcontract from Marquette University	9/30/2017
Krzak, J.	CHS-DG	Physical Therapy	Disability and Rehabilitation Research Program (DRRP) on Mobility in Children with Orthopaedic Disabilities	3/20/2017	\$154,220	U.S. Department of Health and Human Services Subcontract from Marquette University	9/30/2017

TOTAL OF CHS-DG EXTRAMURALLY SUBMITTED PROPOSALS: \$200,020

**COLLEGE OF HEALTH SCIENCES-GLENDALE (CHS-GD):
EXTRAMURALLY SUBMITTED PROPOSALS**

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Burns, S.	CHS-GD	Nurse Anesthesia	Nurse Anesthetist Traineeship	11/22/2016	\$45,000	HRSA Nurse Anesthesia Traineeship	7/1/2017
*Eckman, D., Jones, C. & Powell, J.	CHS-GD	Biomedical Sciences, Behavioral Sciences	Cerebrovascular Function in APOE3 and APOE4 Targeted-replacement Mice	5/15/2017	\$9,078 (includes a \$4,539 match from MWU)	Arizona Alzheimer's Consortium	7/1/2017
Montgomery, M.	CHS-GD	Biomedical Sciences	Epigenetic Mechanisms Controlling Switching between Metastatic and Proliferative Subtypes in the SW13 Adrenal Adenocarcinoma Cell Line	10/4/2016	\$184,872	Science Foundation Arizona - Bisgrove Scholar Award	1/1/2017
*Soby, S.	CHS-GD	Biomedical Sciences	Inhibition of Fungal Infections by Bacterial Volatile Compounds	6/23/2017	\$452,969	NIH-R15 with a Subcontract to Arizona State University	7/1/2018
Wellensiek, B.	CHS-GD	Biomedical Sciences	Enhancement of Transgene Expression from Recombinant Vaccinia Viruses	10/14/2016	\$164,759	NIH-R03 with a Subcontract to Arizona State University	7/1/2017

TOTAL OF CHS-GD EXTRAMURALLY SUBMITTED PROPOSALS: \$856,678

**COLLEGE OF PHARMACY-GLENDALE (CPG):
EXTRAMURALLY SUBMITTED PROPOSALS**

Investigator/s	College	Department	Proposal Title	Date	Total	Agency	Start Date
Elbayoumi, T.	CPG	Pharmaceutical Sciences	CD44-targeted Multi-layered Tocotrienol Nanoemulgels for Chemosensitization of Malignant Melanomas to Augment Pro-apoptotic Effects of Therapeutic Agents	2/28/2017	\$150,000	NIH-R03	12/1/2017
Olsen, M.	CPG	Pharmaceutical Sciences	Evaluation of ASPH Inhibitor, Pharmacokinetics, Toxicity and Pharmacology	10/28/2016	\$150,000	NIH-R03	11/1/2017
Olsen, M.	CPG	Pharmaceutical Sciences	Alternative Target to Treat Alzheimer's Disease Utilizing Small Molecule Inhibitors	12/10/2016	\$158,913	Alzheimer's Drug Discovery Foundation with a Subcontract to Charles University (Prague)	6/1/2017
Olsen, M.	CPG	Pharmaceutical Sciences	Aspartyl(Asparaginyl)-beta-Hydroxylase Inhibitors for the Treatment of Osteosarcoma	1/31/2017	\$50,000	Sarcoma Foundation	6/1/2017
Olsen, M.	CPG	Pharmaceutical Sciences	Targeted Therapy of Cholangiocarcinoma	2/5/2017	\$383,124	NIH-R01 Subcontract from Rhode Island Hospital	9/1/2017
Veltri, C.	CPG	Pharmaceutical Sciences	Influence on Immune Signaling by Sonoran Desert Plant Derived Chemistry	3/15/2017	\$5,000	Society of Pharmacognosy	7/1/2017
Weissig, V.	CPG	Pharmaceutical Sciences	Cationic Bolaamphiphiles (CAB) and Phosphorothioate Gappers as Antisense Therapy for <i>C. difficile</i>	10/16/2016	\$18,567	NIH-R21 Subcontract from Pennsylvania State University	7/1/2017
Yao, M.	CPG	Pharmaceutical Sciences	Abrogation of Thrombospondin-1-induced Ischemia Reperfusion Injury by Pharmaceutical Formula of CD47	10/4/2016	\$200,000	Science Foundation Arizona - Bisgrove Scholar Award	1/1/2017

TOTAL OF CPG EXTRAMURALLY SUBMITTED PROPOSALS: \$1,115,604

**COLLEGE OF VETERINARY MEDICINE (CVM):
EXTRAMURALLY SUBMITTED PROPOSALS**

Investigator/s	College	Department	Proposal Title	Date	Total	Agency	Start Date
*Bouwer, A.	CVM	Veterinary Medicine	VSGP Grant: Food Animal Extension and Educational Support Partnership	5/18/2017	\$248,594	USDA AFRI	1/1/2018
Brosnahan, M.	CVM	Veterinary Medicine	Investigating Parasite Loads and Anthelmintic Resistance in Owned and Wild Equids in Arizona	7/13/2016	\$10,677	Morris Animal Foundation	11/1/2016
Englar, R.	CVM	Veterinary Medicine	Training Veterinary Technicians to be In-Room Facilitators for Standardized Client Encounters	7/25/2016	\$900	American Veterinary Medical Association	1/1/2017
Graves, T.	CVM	Veterinary Medicine	Robust Gradient Irradiation Intensity-Modulated Proton Therapy with Bystander Effects Considered in Glioblastoma Multiforme	9/21/2016	\$26,603	NIH-U01 Subcontract from Mayo Clinic	7/1/2017
Jaffe, M.	CVM	Veterinary Medicine	Laser-Activated Tissue Integrating Sealants (LATIS) for Combat Casualty Surgeries	12/30/2016	\$31,951	Air Force Office of Scientific Research Subcontract from Arizona State University	9/1/2017
*Lee, J.	CVM	Veterinary Medicine	Multifunctional Biomaterials for Skin Sealing	6/5/2017	\$139,182	NIH-R01 Subcontract from Arizona State University	4/1/2018
Mexas, A.	CVM	Veterinary Medicine	Alternative Delivery Methods for Post-Operative Analgesia Using Meloxicam in Mice	2/1/2017	\$7,500	Grants for Laboratory Animal Science	3/1/2017
Murthy, A.	CVM	Veterinary Medicine	Merial Veterinary Scholarship Program	10/31/2016	\$18,928	Merial	6/1/2017
Murthy, A.	CVM	Veterinary Medicine	Characterization of the Role of Gap Junction Mediated Antigen Transport in Pathogenesis of Allergic Airway Disease	2/16/2017	\$375,000	NIH-R21	9/1/2017

TOTAL OF CVM EXTRAMURALLY SUBMITTED PROPOSALS: \$859,335

**INSTITUTE FOR HEALTHCARE INNOVATION (IHI):
EXTRAMURALLY SUBMITTED PROPOSALS**

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Woods, C.	Glendale	IHI	Evaluation of a Novel Aqueous Shunt in Dogs with Primary Glaucoma	2/1/2017	\$14,958	American Kennel Association	4/1/2017
Murphy, K. & Woods, C.	Glendale	IHI	Development of a First Generation Methylome Map of the Dog	3/15/2017	\$79,703	Morris Animal Foundation with a Subcontract to Clemson University	8/1/2017
*Murphy, K. & Woods, C.	Glendale	IHI	Epigenomics of the Domestic Dog: Development of a First Generation Methylome Map	6/16/2017	\$412,500	NIH-R21	7/1/2018

TOTAL OF IHI EXTRAMURALLY SUBMITTED PROPOSALS: \$507,161

**MWU SUBMITTED 78 EXTRAMURAL PROPOSALS FROM ALL COLLEGES
FOR Q4 OF FISCAL YEAR 2017: \$18,641,016**

*The asterisk denotes new material. All material in this report is cumulative from July 1, 2016 through June 30, 2017.

AZCOM: ALL ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS DURING THE REPORTING PERIOD

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Al-Nakkash, L.	AZCOM	Physiology	Genistein: Understanding Its Ability to Ameliorate Intestinal Dysfunction in Diabetes	\$20,000	Diabetes Action Research and Education Foundation	1/1/2017	12/31/2017
Baab, K.	AZCOM	Anatomy	Integration of Robust Features Across the Cranial and Postcranial Skeleton	\$10,128	The Leakey Foundation	2/1/2015	2/4/2017
Broderick, T.	AZCOM	Physiology	The Cardiac Oxytocin System in Diabetes	\$25,000	Diabetes Action Research and Education Foundation	1/1/2012	12/31/2016
Haley, N.	AZCOM	Microbiology & Immunology	Managing CWD in Farmed Cervids through Antemortem Testing, Targeted Culling, and Development of Genetic Resistance Breeding Programs	\$48,593	North American Deer Farmers Association	3/1/2016	3/1/2021
Haley, N.	AZCOM	Microbiology & Immunology	Managing CWD in Farmed Cervids through Antemortem Testing, Targeted Culling, and Development of Genetic Resistance Breeding Programs	\$8,625	North American Elk Breeder's Association	3/1/2016	3/1/2021
Jentarra, G.	AZCOM	Biochemistry	Analysis of the Presence and Potential Role of Chronic Infection in Alzheimer's Disease	\$70,000 (includes a \$35,000 match from MWU)	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2016	6/30/2017
Kim, C.	AZCOM	Biochemistry	The Role of SAM Polymerization in Polycomb-dependent Chromatin Structures	\$1,019,683	NIH-R01 with a Subcontract to the Institut de Recherches Cliniques de Montréal	6/1/2016	5/31/2020
Kim, C. (Lee, O., AZCOM '18)	AZCOM	Biochemistry	Structural Analysis of Polycomb Repressive Complex 1 (PRC1) in Cancer Stem Cells	\$5,000	American Medical Association	6/16/2016	4/16/2017
Riede, T.	AZCOM	Physiology	The Evolution of Avian Vocalization	\$137,111	Gordon and Betty Moore Foundation Subcontract from The University of Texas at Austin with a Subcontract to Brigham Young University	11/1/2014	2/27/2018
Speicher, M.	AZCOM	Administration	Improving the Predictive Value of Clinical Clerkship Grades in Estimated Competence In Entrustable Professional Activities	\$4,920	American Association of Colleges of Osteopathic Medicine	7/1/2016	12/31/2017

AZCOM ALL ACTIVE RESEARCH AWARDS (Continued)

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Speicher, M.	AZCOM	Administration	The Value of Osteopathic Clinical Care: A Multi-Level Analysis	\$81,119	American Osteopathic Association	9/1/2016	2/28/2018
Worden, K.	AZCOM	OMM	DO-Touch.NET: Patient-reported Adverse Events from Osteopathic Manipulative Treatment	\$2,700	A.T. Still University	10/4/2016	10/3/2017

TOTAL OF AZCOM ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$1,432,879

AZCOPT: ALL ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS DURING THE REPORTING PERIOD

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Esposito, C.	AZCOPT	Optometry	Study of Adult Strabismus (SAS1): A Prospective Observational Study of Adult Strabismus	\$5,625	National Eye Institute Cooperative Agreement with JAEB Center for Health Research, Inc.	3/1/2016	3/1/2017
Handford, P.	AZCOPT	Optometry	Study of Binocular Computer Activities for Treatment of Amblyopia (ATS18)	\$9,585	National Eye Institute Cooperative Agreement with JAEB Center for Health Research, Inc.	11/1/2014	9/30/2016
Kozlowski, M.	AZCOPT	Optometry	Antiproliferative Activity of a New Class of Peptides	\$72,523	Kalos Therapeutics	3/1/2014	2/5/2017
*Kozlowski, M.	AZCOPT	Optometry	Antiproliferative Activity of a New Class of Peptides	\$72,200	Kalos Therapeutics	6/12/2017	6/11/2018

TOTAL OF AZCOPT ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$159,933

CHICAGO COLLEGE OF OPTOMETRY (CCO): ALL ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS DURING THE REPORTING PERIOD

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Yadav, N.	CCO	Optometry	Objective Assessment of Visual Attention in Younger Children with ADHD Using Visual Evoked Potentials (VEP)	\$4,000	College of Optometrists in Vision Development	9/15/2016	9/15/2017

TOTAL OF CCO ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$4,000

**CCOM: ALL ACTIVE EXTRAMURALLY-FUNDED
RESEARCH AWARDS DURING THE REPORTING PERIOD**

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Bjork, B.	CCOM	Biochemistry	Prdm16 and Mecom in Mouse Embryonic Mandible and Palate Development	\$446,940	NIH-R15	7/1/2014	6/30/2018
*Henderson, K.	CCOM	Physiology	Analytical Assessment of the Cranial Rhythmic Impulse	\$8,000	American Academy of Osteopathy	6/15/2017	6/15/2019
Kopf, P.	CCOM	Pharmacology	The Role of 12-Lipoxygenase in Aldosterone Secretion	\$417,791	NIH-R15	7/1/2015	6/30/2018
Mejia-Alvarez, R.	CCOM	Physiology	Control of IP ₃ R-mediated Calcium Release	\$122,504	NIH-R01 Subcontract from Rush University Medical School	6/1/2015	5/31/2019
Ramsey, K.	CCOM	Microbiology & Immunology	Isolation of Novel Rodent Chlamydiae	\$422,488	NIH-R21	4/1/2016	3/31/2018
Tiwari, V.	CCOM	Microbiology & Immunology	Novel Peptides Against Modified Heparan Sulfate	\$204,875	NIH-R21 Subcontract from University of Illinois Chicago	9/1/2014	8/31/2017
Volin, M.	CCOM	Microbiology & Immunology	Lymphatic Pump Treatment of Inflammation in Rat Adjuvant-Induced Arthritis	\$99,984	American Osteopathic Association	9/1/2016	2/28/2018

TOTAL OF CCOM ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$1,722,582

**CCP: ALL ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS
DURING THE REPORTING PERIOD**

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
D'Souza, J.	CCP	Pharmacy Practice	Evaluating the Impact of Pharmacist Interventions on Statin Adherence	\$5,000	American Society of Health-System Pharmacists Foundation	1/1/2015	1/1/2017
Gulati, A.	CCP	Pharmaceutical Sciences	Mentor and Train PCCM and NPM Fellows for Scholarly Activity	\$61,200	Advocate Health & Hospitals Corporation	1/1/2016	12/31/2016
Gulati, A.	CCP	Pharmaceutical Sciences	Mentor and Train PCCM and NPM Fellows for Scholarly Activity	\$63,036	Advocate Health & Hospitals Corporation	1/1/2017	12/31/2017
Scheetz, M.	CCP	Pharmacy Practice	Patient-oriented Research on Hospital-acquired Pathogens	\$36,682	NIH-K24 Subcontract from Northwestern University	7/1/2013	6/30/2018
Scheetz, M.	CCP	Pharmacy Practice	Elucidation of an Informed Drug Dosing Scheme to Minimize Kidney Injury	\$458,764	NIH-R15	4/1/2014	3/31/2018

CCP: ALL ACTIVE RESEARCH AWARDS (Continued)

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Scheetz, M.	CCP	Pharmacy Practice	Enhancement of Antibiotic Activity with Nanoparticles	\$39,290	Northwestern Memorial Hospital	1/1/2015	12/31/2016
Scheetz, M.	CCP	Pharmacy Practice	Optimizing Clinical Use of Polymyxin B: Teaching an Old Drug to Treat Superbugs	\$23,866	NIH-R01 Subcontract from Wayne State University	6/19/2015	8/31/2016
Scheetz, M.	CCP	Pharmacy Practice	Defining the Link Between Cefepime Exposure and Effect in Canine Pneumonia: A Two-Way Bridge Serving Dogs and Humans	\$12,500	CARE Foundation	1/1/2016	12/31/2017
Scheetz, M.	CCP	Pharmacy Practice	Optimizing Clinical Use of Polymyxin B: Teaching an Old Drug to Treat Superbugs	\$75,162	NIH-R01 Subcontract from the University of Michigan	9/1/2016	5/31/2020
Schumacher, C.	CCP	Pharmacy Practice	MEDication Focused Outpatient Care for Underutilization of Secondary Prevention	\$63,083	NIH-R18 Subcontract from the University of Iowa	4/1/2014	3/31/2019
Tran, T. & Fjortoft, N.	CCP	Pharmacy Practice & Administration	Preparing Pharmacy Students for their Role in the Opioid Crisis: Advancing the Pharmacy Curriculum	\$20,000	National Association of Chain Drug Stores	10/1/2016	5/31/2019

TOTAL OF CCP ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$858,583

CHS-DG: ALL ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS DURING THE REPORTING PERIOD

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Mahaffey, L.	CHS-DG	Occupational Therapy	Tiered Occupational Therapy (TOT): Preparing Scholars to Work in School Mental Health	\$1,157,279	U.S. Department of Education	12/1/2015	11/30/2020
Anderson, D.	CHS-DG	Physical Therapy	Excellence in Pediatric Physical Therapy Education	\$700	Academy of Pediatric Physical Therapy, American Physical Therapy Association Subcontract from Creighton University	3/24/2017	1/1/2018

TOTAL OF CHS-DG ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$1,157,979

**CHS-GD: ALL ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS
DURING THE REPORTING PERIOD**

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Esfandiarei, M.	CHS-GD	Biomedical Sciences	Role of Caveolin-1 in the Progression of Aortic Aneurysm in Marfan Syndrome	\$75,000	Marfan Foundation	7/1/2015	6/30/2017
Esfandiarei, M.	CHS-GD	Biomedical Sciences	Children and Adolescents with Marfan Syndrome - 10,000 Healthy Steps and Beyond	\$30,484	Marfan Foundation Subcontract from Stanford University	1/1/2017	12/31/2018

TOTAL OF CHS-GD ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$105,484

**CPG: ALL ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS
DURING THE REPORTING PERIOD**

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Huang, V. (Molina, K., CPG '18)	CPG	Pharmacy Practice	Detection of Heterogeneity in <i>Staphylococcus aureus</i> Isolates: Comparing PAP-AUC of Automated vs. Manual Method	\$4,764	ACCP Research Institute	9/15/2016	9/14/2017
*Weissig, V.	CPG	Pharmaceutical Sciences	Cationic Bolaamphiphiles (CAB) and Phosphorothioate Gappers as Antisense Therapy for <i>C. difficile</i>	\$18,567	NIH-R21 Subcontract from the Pennsylvania State University	6/5/2017	5/31/2019

TOTAL OF CPG ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$23,331

**CVM: ALL ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS
DURING THE REPORTING PERIOD**

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
*Englar, R.	CVM	Veterinary Medicine	Training Veterinary Technicians to be In-room Facilitators for Standardized Client Encounters	\$900	American Veterinary Medical Association	6/1/2017	8/31/2017
Jaffe, M. & Wong, V.	CVM	Veterinary Medicine	Photothermal Nanocomposites for Tissue Repair	\$76,876	NIH-R01 Subcontract from Arizona State University	9/9/2015	5/31/2019
*Mexas, A.	CVM	Veterinary Medicine	Alternative Delivery Methods for Post-Operative Analgesia Using Meloxicam in Mice	\$7,500	Grants for Laboratory Animal Science	3/1/2017	2/28/2018
Murthy, A.	CCOM	Pathology	Immunopathogenesis of Chlamydia Pneumonia Medicated Atherosclerosis	\$214,500	American Heart Association - Midwest Affiliate	7/1/2013	6/30/2017

CVM: ALL ACTIVE RESEARCH AWARDS (Continued)

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Murthy, A.	CVM	Veterinary Medicine	Mechanism(s) of CD8 ⁺ T Cell-mediated Chlamydia-induced Reproductive Pathology	\$450,000	NIH-R15	7/1/2016	6/30/2019
Wong, V.	CVM	Veterinary Medicine	The Value and Utility of Incentives in Engaging Veterinarian Practitioners in Clinical Research	\$2,000	Merial	8/1/2015	8/31/2017

TOTAL OF CVM ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$751,776

IHI: ALL ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS DURING THE REPORTING PERIOD

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Impens, A.	IHI	Institute for Healthcare Innovation	Empathy: From Medical School to Residency	\$1,702	American Association of Colleges of Osteopathic Medicine	7/1/2016	12/31/2017
Woods, C. & Murphy, K.	IHI	Institute for Healthcare Innovation	Canine Genetics Disease Database	\$19,925	CARE Foundation	6/29/2016	6/30/2017
Woods, C.	IHI	Institute for Healthcare Innovation	Therapeutic Effect of an Endothelin Agonist in Dogs with Degenerative Myelopathy	\$9,750	CARE Foundation	6/1/2016	5/31/2018

TOTAL OF IHI ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$31,377

TOTAL MWU ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$6,247,924

ALL OTHER ACTIVE EXTRAMURALLY-FUNDED AWARDS DURING THE REPORTING PERIOD

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Burns, S.	CHS-GD	Nurse Anesthesia Program	Nurse Anesthetist Traineeships	\$30,136	Health Resources and Services Administration	7/1/2016	6/30/2017
Thompson, C.	CHS-GD	Physician Assistant Program	Physician Assistant Training in Primary Care	\$897,456	Health Resources and Services Administration	8/1/2012	7/31/2017

TOTAL OTHER ACTIVE EXTRAMURALLY-FUNDED AWARDS: \$927,592

Proposals included are defined as active grants based on end dates reported to the ORSP on the Principal Investigator's Proposal Approval Form plus any granted no-cost extension or contract addendum.

TOTAL MWU ACTIVE EXTRAMURALLY-FUNDED AWARDS: \$7,175,516

*The asterisk denotes new material. All material in this report is cumulative from July 1, 2016 through June 30, 2017.

Astill BD (AZCOM), **Katsma MS** (AZCOM), **Cauthon DJ** (CHS-GD), **Greenlee J** (AZCOM), **Murphy M** (AZCOM), **Curtis D** (CHS-GD) & **Carroll CC** (AZCOM). (2016) Sex-based difference in Achilles tendon release of matrix metalloproteinases and growth factors after acute resistance exercise. *Journal of Applied Physiology* November 23: epub ahead of print.

Barchilon M (CVM), **Gaspar C** (CHS-GD), **Mexas A** (CVM) & **Nieter D**. (2016) A novel centrifugation method using a cell salvage device offers an alternative to the use of leukocyte-depleting filters for autologous blood transfusions. *The Journal of ExtraCorporal Technology* 48:168-172.

Barletta JF (CPG), **Mangram AJ**, **Byrne M**, **Hollingworth AK** (AZCOM), **Sucher JF**, **Ali-Osman FR**, **Shirah GR** & **Dzandu JK**. (2016) The importance of empiric antibiotic dosing in critically ill trauma patients: Are we under-dosing based on augmented renal clearance and inaccurate renal clearance estimates? *The Journal of Trauma and Acute Care Surgery* 81(6):1115-1121.

***Belden SE** (OPTI), **Uppalapati CK** (AZCOM), **Pascual AS** (CHS-GD), **Montgomery MR** (CHS-GD), **Leyva KJ** (AZCOM), **Hull EE** (CHS-GD) & **Averitte RL**. (2017) Establishment of a clinic-based biorepository. *Journal of Visualized Experiments* 123:e55583.

Ciancio MJ (CHS-DG), **Lee MM** (CHS-DG), **Krumdick ND** (CHS-DG), **Lencioni C** (Library) & **Kanjirath PP** (CDMI). (2017) Self-perceived knowledge, skills, attitudes, and use of evidence-based dentistry among practitioners transitioning to dental educators. *Journal of Dental Education* 81(3):271-277.

***Edwards JR** (CCOM), **Fossum TW** (CVM), **Nichols KJ** (CCOM), **Noah DL** (CVM), **Tarpley RJ** (AZCOM) & **Prozialeck WC** (CCOM). (2017) One Health: Children, waterfowl, and lead exposure in Northwestern Nigeria. *The Journal of the American Osteopathic Association* 117(6):370-376.

Fjortoft NF (CCP), **Cornell S** (CCP), **Kliethermes MA** (CCP) & **VanWinkle LJ** (CCOM). (2016) Inter-healthcare professions collaboration: Educational and practical aspects and new developments. *Frontiers in Pharmacology - Pharmaceutical Medicine and Outcomes Research* 7:306.

***Gibson CP** (CHS-GD), **Nielsen C** (CHS-GD), **Alex R** (CHS-GD), **Cooper K** (CHS-GD), **Farney M** (CHS-GD), **Gaufin D** (CHS-GD), **Cui JZ**, **van Breemen C**, **Broderick TL** (AZCOM), **Vallejo-Elias J** (AZCOM) & **Esfandiarei M** (CHS-GD). (2017) Mild aerobic exercise blocks elastin fiber fragmentation and aortic dilation in a mouse model of Marfan syndrome associated aortic aneurysm. *Journal of Applied Physiology* April 6: epub ahead of print.

Hernandez C (CVM), **Sabin M** (AZCOM) & **Riede T** (AZCOM). (2017) Rats concatenate 22 kHz and 50 kHz calls into a single utterance. *Journal of Experimental Biology* 220(5):814-821.

***Hull EE** (CHS-GD), **Montgomery MR** (CHS-GD) & **Leyva KJ** (AZCOM). (2017) Epigenetic regulation of the biosynthesis & enzymatic modification of heparin sulfate proteoglycans: Implications for tumorigenesis and cancer biomarkers. *International Journal of Molecular Sciences* 18(7):1361.

PEER-REVIEWED PUBLICATIONS - MULTI-COLLEGE (Continued)

Hull EE (CHS-GD), **Montgomery MR** (CHS-GD) & **Levy KJ** (AZCOM). (2016) HDAC inhibitors as epigenetic regulators of the immune system: Impacts on cancer therapy and inflammatory diseases. *BioMed Research International* 2016:8797206.

***Imus FS** (CHS-GD), **Burns S** (CHS-GD) & **Weglarz DM** (OIR). (2017) Self-efficacy and graduate education in a nurse anesthesia program: A pilot study. *AANA Journal* 85(3):1-12.

Incrocci R (CCOM), **Barse L** (CHS-DG), **Stone A** (CCOM), **Vagvala S** (CCOM), **Montesano M** (CCOM), **Subramaniam V** (CHS-DG) & **Swanson-Mungerson M** (CCOM). (2017) Epstein-Barr Virus Latent Membrane Protein 2A (LMP2A) enhances IL-10 production through the activation of Bruton's tyrosine kinase and STAT3. *Virology* 500:96-102.

***Johnson GM** (CDMA), **Polk HH** (CDMA), **Van Da Huvel SD** (CDMA), **Ferguson GP** (CDMA) & **Soby SD** (CHS-GD). (2017) A comparison of seven pre-dental postbaccalaureate programs in gaining dental school acceptance for their students. *Journal of Dental Education* 81(5):526-533.

Knecht-Sabres LJ (CHS-DG), **Gunn JF** (CHS-DG), **Conroy C** (CHS-DG), **Getch SE** (CHS-DG), **Cahill SM** (CHS-DG), **Lee MM** (CHS-DG), **Ciancio MJ** (CHS-DG), **Jaskolski J** (CHS-DG), **Palmisano L** (CCP) & **Kristjansdottir K** (CHS-DG). (2016) Effectiveness of an interprofessional education event for graduate health professional students. *Internet Journal of Allied Health Sciences and Practice* 14(4):2.

***Kramer R** (CDMA), **Rolf D** (CDMA), **Mitchell JC** (CDMA), **Sidaway B** (CVM), **Pogge E** (CPG), **Townsend B** (AZCOM), **Drinkwater K** (CDMA), **Ly S** (AZCOM), **Jennings J** (CDMA), **Tarkesh N** (CDMA), **Griffin P** (CPG), **Donaldson O** (CDMA), **Doucette K** (CDMA) & **Denning E** (CVM). (2017) Peer Education: Reviews of the Literature (PERLs): Integration of digital technologies in health professions education. *Journal of Dental Education* 81(4):489-492.

Potter RM (AZCOM), **Huynh RT** (CDMA), **Volper BD** (CHS-GD), **Arthur KA** (AZCOM), **D'Lugos A**, **Sørensen MA**, **Magnusson SP**, **Dickinson JM**, **Hale TM** & **Carroll CC**. (2016) The impact of TGF- β inhibition during acute exercise on Achilles tendon extracellular matrix. *American Journal of Physiology – Regulatory, Integrative and Comparative Physiology* December 7: epub ahead of print.

Rhodes NJ (CCP), **Prozialeck WC** (CCOM), **Lodise TP**, **Venkatesan N** (CCP), **O'Donnell JN** (CCP), **Pais G** (CCP), **Cluff C** (CCP), **Lamar PC** (CCOM), **Neely MN**, **Gulati A** (CCP) & **Scheetz MH** (CCP). (2016) Evaluation of vancomycin exposures associated with elevations in novel urinary biomarkers of acute kidney injury in vancomycin-treated rats. *Antimicrobial Agents and Chemotherapy* 60(10):5742-5751.

***Rhodes NJ** (CCP), **Prozialeck WC** (CCOM), **Lodise TP**, **Venkatesan N** (CCP), **O'Donnell JN** (CCP), **Pais G** (CCP), **Cluff C** (CCP), **Lamar PC** (CCOM), **Neely MN**, **Gulati A** (CCP) & **Scheetz MH** (CCP). (2017) Author correction: Evaluation of vancomycin exposures associated with elevations in novel urinary biomarkers of acute kidney injury in vancomycin-treated rats. *Antimicrobial Agents and Chemotherapy* 61(4):e00185-17.

Van Winkle LJ (CCOM), **Cornell S** (CCP) & **Fjortoft NF** (CCP) (Eds.). (2016) *Inter-Healthcare Professions Collaboration: Educational and Practical Aspects and New Developments*. (pp.1-28). Lausanne, Switzerland: Frontiers Media SA.

PEER-REVIEWED PUBLICATIONS - NOT COLLEGE AFFILIATED

Franzen S & **Bannon CM** (DG Library). (2016) Merging information literacy and evidence-based practice in an undergraduate health sciences curriculum map. *Communications in Information Literacy* 10(2):245-263.

PEER-REVIEWED PUBLICATIONS - AZCOM

Al-Nakkash L. (2016) Utilizing a dietary supplement to modify small intestinal secretory function. *Journal of Nutrition & Food Sciences* November 30:epub ahead of print.

***Anderson EE**, Campbell DH, **Ezell K**, Standley PR & **Grow WA.** (2017) Antibody to MyoD decreases myogenin gene expression and agrin-induced acetylcholine receptor clustering. *Journal of Neuroscience & Clinical Research* 2(1).

***Bae NS**, Seberg AP, Carroll LP & **Swanson MJ.** (2017) Identification of genes in *Saccharomyces cerevisiae* that are haploinsufficient for overcoming amino acid starvation. *G3: Genes, Genomes, Genetics* 7(4):1061-1084.

Balekunja RB, Kamakoti V, Peter A, Phadnis S, Prasad S & **Nagaraj VJ.** (2016) The detection of papaya ringspot virus coat protein using an electrochemical immunosensor. *Analytical Methods* November 4:epub ahead of print.

***Broderick TL.** (2017) Role of corticosterone and expression of 11 β -hydroxysteroid dehydrogenase type 1 in liver on post-exercise hyperglycemia in the obese diabetic mouse. *Advanced Techniques in Biology & Medicine* 5(1):200.

***Broderick TL**, Jankowski M & Gutkowska J. (2017) The effects of exercise training and caloric restriction on the cardiac oxytocin natriuretic peptide system in the diabetic mouse. *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy* 10:27-36.

Brown CH & **Riede T.** (2017) An introduction to laryngeal biomechanics. In C Brown & T Riede (Eds.) *Comparative Bioacoustics: An Overview.* (pp.120-164). Oak Park, IL: Bentham Science Publishers.

Brown CH & **Riede T** (Eds.). (2017) *Comparative Bioacoustics: An Overview.* (pp.1-490). Oak Park, IL: Bentham Science Publishers.

Castro MA, **Kerecsen L** & Krishna BR. (2017) *USMLE Step 1 Lecture Notes 2017: Pharmacology.* C Davis & SR Harris (Eds.). (pp.1-352). New York, NY: Kaplan, Inc.

Catmull S, Masood F, **Schacht S**, **Dolan R**, **Stegman D**, **Leung L** & **Al-Nakkash L.** (2016) Dietary genistein rescues reduced basal chloride secretion in diabetic jejunum via sex-dependent mechanisms. *Cellular Physiology and Biochemistry* 40(1-2):335-346.

Clarke JA, Chatterjee S, Li Z, **Riede T**, Agnolin F, Goller F, Isasi MP, Martinioni DR, Mussel FJ & Novas FE. (2016) Fossil evidence of the avian vocal organ from the Mesozoic. *Nature* 538(7626):502-505.

DiPrinzio D & Sethi R. (2016) Will adding methadone to controlled substance monitoring programs help psychiatrists prevent prescription drug overdoses? *The Primary Care Companion to CNS Disorders* 18(2):e128.

PEER-REVIEWED PUBLICATIONS - AZCOM (Continued)

Ercoli MD, Álvarez A, Busker F, Morales MM, Julik E, **Smith HF, Adrian B**, Barton M, Bhagavatula K, Poole M, Shahsavan M, Wechsler R & Fisher RE. (2016) Myology of the head, neck, and thoracic region of the lesser Grison (*Galictis cuja*) in comparison with the Red Panda (*Ailurus fulgens*) and other carnivorans: Phylogenetic and functional implications. *Journal of Mammalian Evolution* July 12: epub ahead of print.

Everman S, Meyer C, Tran L, Hoffman N, Carroll CC, **Dedmon WL** & Katsanos CS. (2016) Insulin does not stimulate muscle protein synthesis during increased plasma branched-chain amino acids alone but still decreases whole body proteolysis in humans. *American Journal of Physiology - Endocrinology and Metabolism* 311(4):E671-E677.

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*The asterisk denotes new material. All material in this report is cumulative from July 1, 2016 through June 30, 2017.

INTRAMURAL FUNDING

AZCOM

Investigator/s	College	Department	Proposal Title
Al-Nakkash, L.	AZCOM	Physiology	Genistein's Mechanism of Reaction on Intestinal Secretion
Broderick, T.	AZCOM	Physiology	Carnitine Homeostasis in Diabetes and Exercise
Call, G.	AZCOM	Pharmacology	Ischemia/Reperfusion Injury Model in <i>Drosophila</i>
Gonzalez, F.	AZCOM	Microbiology & Immunology	Role of <i>Candida albicans</i> Lap3p Aminopeptidase in Fungal Dimorphism
Griffin, M. J.	AZCOM	Biochemistry	Role of Early B-cell Factor in Adipocyte Inflammation
Grossman, A.	AZCOM	Anatomy	Paleontological Survey of the Miocene Terrestrial Sediments of Israel
Hall, M.	AZCOM	Physiology	Retinal Wholemount Studies of Arizona Diapsids (Bird and Lizard): A New Data Set for Testing the Relationships between Retinal Morphology and Activity Patterns
Heesy, C. P.	AZCOM	Anatomy	High Resolution MicroCT Scanning of Skulls for Scaling Analyses of Orbit Anatomy in Nocturnal and Diurnal Bird Species
Hume, D.	AZCOM	Clinical Education	Osteopathic Manipulative Medicine's Effects on the Autonomic Nervous System and Anxiety
Jensen, L. A.	AZCOM	Microbiology & Immunology	The Epidemiology of <i>Giardia</i> Genotypes in Dogs and Cats in the Greater Phoenix Area
Jentarra, G.	AZCOM	Biochemistry	Analysis of Cerebellar Cell Populations in the MeCP2 A140V Mouse Model of Rett Syndrome/XLMR
Jones, D. C.	AZCOM	Pharmacology	Characterization of Muscarinic Receptor Uncoupling in Alzheimer's Disease
Jones, T. B.	AZCOM	Antatomy	Age- and Region-specific Alterations in TREM2 and Microglial Phenotype in APOE4-targeted Replacement Mice
Katzif, S.	AZCOM	Microbiology & Immunology	Regulation of cspA in <i>Staphylococcus aureus</i> Newman
Kaufman, J. A.	AZCOM	Anatomy	Investigating New Methods of Optical Clearing for Histological Imaging of Thick Specimens
Korch, S.	AZCOM	Pharmacology	Regulation of <i>Mycobacterium tuberculosis</i> Toxin Protein Activity in Serine/ Threonine Protein Kinase Phosphorylation
Lawson, K.	AZCOM	Biochemistry	The Role of P-cadherin in Oral Tumor Progression
Lee, A. H.	AZCOM	Anatomy	Diversity in Skeletal Distribution and Histology of Avian Medullary Bone
Leyva, K. J.	AZCOM	Microbiology & Immunology	Characterization of Exosomes Isolated from Squamous Cell Carcinoma and Their Role in Inducing Oncogenic Potential in Normal Keratinocytes
Nydam, R. L.	AZCOM	Anatomy	Investigation of the Taxonomic and Systematic Diversity of the Enigmatic Fossil Snake Taxon "Coniophis"
Potter, P. E.	AZCOM	Pharmacology	Muscarinic Receptor Antagonists in an Animal Model of Alzheimer's Disease
Smith, H. F.	AZCOM	Anatomy	A Multi-tiered Comparison of Craniometric and Genetic Distances in Specimens from the Norris Farms #36 Archeological Cemetery Site
Tarr, D. E. K.	AZCOM	Microbiology & Immunology	<i>In vivo</i> and <i>In vitro</i> Testing of Three <i>Caenorhabditis elegans</i> Antimicrobial Peptides
Townsend, K. E. B.	AZCOM	Anatomy	Extinction and Environmental Change: Are the Paleontological Patterns Always Telling us the Truth?
Vallejo-Elias, J.	AZCOM	Physiology	Alterations in TREM2 and Microglial Phenotype in Young-adult APOE4 Human Carriers and Older Adults with Dementia and Their Association with Alzheimer's Disease Neurologic Risk

TOTAL AZCOM INTRAMURAL FUNDING: \$108,637

INTRAMURAL FUNDING

AZCOPT

Investigator/s	College	Department	Proposal Title
Blacker, A.	AZCOPT	Optometry	The Effect of Visual Acuity and Blur on Pitch-Spin Pattern Recognition
Harrison, W.	AZCOPT	Optometry	Longitudinal Follow-up of Estrogen and the mfERG
Kozlowski, M. R.	AZCOPT	Optometry	Biochemical Evaluation of New Classes of Compounds for the Treatment of Dry AMD
Osmotherly, K. & Harrison, W.	AZCOPT	Optometry	Effect of Pupil Testing on the mfERG
Porzukowiak, T.	AZCOPT	Optometry	Forskolin (<i>Coleus forskohlii</i> root) Efficacy in Normal and High Ocular Pressure Randomized, Double-masked Clinical Trial
Putnam, N.	AZCOPT	Optometry	Building and Testing the Tracking Scanning Laser Ophthalmoscope (TSLO) at the Arizona College of Optometry
Putnam, N. & Yeh, F.	AZCOPT	Optometry	Changes in Ocular Aberrations and Visual Performance Associated with Scleral Contact Lens Wear in Normal Subjects
Vasudevan, B., Helmuth, K. & Nagaraj, V. (AZCOM)	AZCOPT	Optometry	Optimizing Protocol to Assess Biomarkers in Tear Film
Vasudevan, B. & Yeh, F.	AZCOPT	Optometry	Visual and Optical Performance of Multifocal Contact Lenses

TOTAL AZCOPT INTRAMURAL FUNDING: \$33,283

OSTEOPATHIC POSTDOCTORAL TRAINING INSTITUTION (OPTI)

Investigator/s	College	Department	Proposal Title
Estrada, S., HonorHealth Medical Group (Belden, S., PGY-2)	AZCOM	OPTI	Analysis of Melanoma Markers in Excised Tumors and Correlation to Patient Outcomes
Goedken, M. & Miller, K., Affiliated Dermatology (Blackburn, S., PGY-2 & Belden, S., PGY-2)	AZCOM	OPTI	Effects of Acupuncture on Chronic Pruritus
*Helminski, J., CHS-DG (Leszczynski, B., PGY-3, Wilczynski, N., PGY-3 & Robertson Fuenzalida, K., EM Core Faculty Member)	CCOM	OPTI	Differential Diagnosis of Acute Vertigo in the Emergency Department: Central v Peripheral Vestibular Dysfunction

TOTAL OPTI INTRAMURAL FUNDING: \$7,500

CCO

Investigator/s	College	Department	Proposal Title
Chun, R.	CCO	Optometry	Comparison of Normative Value of Photopic Negative Response (PhNR) with Microperimetry and OCT
de Gracia, P.	CCO	Optometry	Optimal Orientation of Presbyopic Designs and Relationship Between Refractive Error Development and Ocular Movements
Deligio, D.	CCO	Optometry	How Low Can You Go? A Case Report of Treating Moderate Myopia and Flat Corneas with Orthokeratology
Doshi, R.	CCO	Optometry	Visual Performance of a Multifocal Versus Monovision Soft Contact Lens in Established Presbyopes Utilizing Lens Power Profiles

TOTAL CCO INTRAMURAL FUNDING: \$27,700

INTRAMURAL FUNDING

CCOM

Investigator/s	College	Department	Proposal Title
Chandar, N.	CCOM	Biochemistry	Role of Retinoblastoma Gene in Osteoblast Adhesion and Communication
Edwards, J.	CCOM	Pharmacology	Mechanism of Cadmium-induced Hyperglycemia and Hypoglycemia; Diabetic Nephropathy and Urinary Biomarkers of Renal Function
*Gallegos, K.	CCOM	Microbiology & Immunology	Evaluation of the Inhibitory Effect of Sulfated Polyanions Against <i>Chlamydia in vitro</i> Attachment and During Sexual Transmission in an Animal Model
Goral, J.	CCOM	Anatomy	Analysis of HMGB1, RAGE and TLR4 in a Mouse Model of Oral Cancer
Green, J.	CCOM	Biochemistry	Analysis of Folate Transport Protein Expression in a Mouse Model of Oral Cancer
LePard, K. J.	CCOM	Physiology	Regulation of Beta Cell GLUT2 and Insulin Receptor by Food Intake
Mayer, A. M. S.	CCOM	Pharmacology	Isolation and Culture of Human Microglia: Effect of Cyanobacterial Lipopolysaccharide on Classical and Alternative Activation
McCulloch, P.	CCOM	Physiology	Brainstem Cardiorespiratory Control Mechanisms
Plotkin, B. J.	CCOM	Microbiology & Immunology	Characterization of Mammalian Cells Under Anoxic Conditions: Physiology, Morphology, and Susceptibility to Pathogens and Chemotherapeutic Agents

TOTAL CCOM INTRAMURAL FUNDING: \$51,687

CCP

Investigator/s	College	Department	Proposal Title
Avedissian, S.	CCP	Pharmacy Practice	Evaluating Cerebrospinal Fluid Concentrations of Cefepime
Gilchrist, A.	CCP	Pharmaceutical Sciences	B-arrestin Signaling by the Short Chain Fatty Acid Receptor FFAR2
Joshi, M.	CCP	Pharmaceutical Sciences	Physical Characterization Lyophilized Liposomal IRL-1620 Product
Mazan, J.	CCP	Pharmacy Practice	United States Pharmacists' Attitudes and Behaviors on Medication Error Disclosure
Pais, G.	CCP	Pharmaceutical Sciences	Blood Markers for Early Detection of Central Nervous System Damage in Patients with Diabetic Ketoacidosis
Rhodes, J.	CCP	Pharmacy Practice	Modulation of Type III Secretion Systems Using Non-bactericidal Azithromycin Exposures in the Treatment of <i>Pseudomonas aeruginosa</i> Pneumonia: A Population Pharmacokinetic Approach
Wang, S.	CCP	Pharmacy Practice	An Evaluation of Meropenem and Vancomycin Pharmacokinetics in Critically Ill Patients on Extracorporeal Membrane Oxygenation (ECMO)

TOTAL CCP INTRAMURAL FUNDING: \$40,456

INTRAMURAL FUNDING

CDMI

Investigator/s	College	Department	Proposal Title
Ali, A. (Bhavsar, B. CDMI '17 & Ford, N. CDMI '17)	CDMI	Dental	Perceptions of the Relationship Between Oral and Systemic Health: A Study of Midwestern University Multi-Specialty Clinic Patients, Students, and Health Professionals
Bjork, B. C. (Aumann, M. CDMI '18 & Raya, K. CDMI '18)	CDMI Joint Appointment	Dental	Functional Assessment of Rare PRDM16 Sequence Variants in C2C12 Cell Differentiation and TGFβ-responsive Luciferase Assays
Chandar, N. (Mangrola, P. CDMI '17)	CDMI Joint Appointment	Dental	Characterization of the Differentiation Potential of Dental Pulp Cells to Odontoblasts and Osteoblasts in 3D Culture
Ciancio, M. (Malaki, L. CDMI '18)	CDMI Joint Appointment	Dental	Head and Neck Squamous Cell Carcinoma: Determination of the Effects of Oral Bacterial Microbiota
Edwards, J. (Koufos, E. CDMI '19 & Wei, Y. CDMI '19)	CDMI Joint Appointment	Dental	Role of the Environmental Toxicant, Cadmium, in Oral Health and Accumulation within Mandibular Bone Tissue
Green, J. (Bhavsar, P. CDMI '17, Kersjes, L. CDMI '18 & Virji, I. CDMI '17)	CDMI Joint Appointment	Dental	Effect of Nutritional Factors on miRNA 21, miRNA 10b and miRNA 31 Expression Based on a Mouse Model of Head and Neck Squamous Cell Carcinoma: Determination of the Effects of Dietary Fat and Folate
Leslie, E. (Bennett, H. CDMI '18 & Holloway, J. CDMI '18)	CDMI Joint Appointment	Dental	Three-dimensional Morphometric MicroCT Analysis of Craniofacial Morphology in Prdm16 Mutant Mice Displaying a Pierre Robin Sequence-like Phenotype
Mayer, A. (Mayer, J. CDMI '19)	CDMI Joint Appointment	Dental	Exploring a Potential Link between Periodontitis and Neurodegenerative Diseases: Rat Brain Microglia Activation by <i>Porphyromonas gingivalis</i> Lipopolysaccharide (LPS)
Plotkin, B. (Halkyard, S. CDMI '18)	CDMI Joint Appointment	Dental	Herpes simplex Virus (HSV-1 and HSV-2) Inhibition of <i>Staphylococcus aureus</i> Adherence to HeLA 299 Cells
Ramos, M. (Parikh, A. CDMI '19)	CDMI	Dental	Evaluation of Roughness, Color and Gloss Changes on Chairside CAD/CAM Porcelain Veneers

TOTAL CDMI INTRAMURAL FUNDING: \$38,881

CHS-DG

Investigator/s	College	Department	Proposal Title
Bryze, K.	CHS-DG	Occupational Therapy	Impact of Adaptive Occupation on the Performance of Daily Life Tasks of Adults with Intellectual and Developmental Disabilities
Cuellar, M.	CHS-DG	Speech-Language Pathology	Time-frequency Analysis of Dual-task Complexity Manipulations in Neurologically Healthy Aging Adults
Evans, C.	CHS-DG	Physical Therapy	Probing the Microbiome of a Physical Therapy Clinic: A Pilot Study
Fay, M.	CCOM	Pharmacology	Effect of Cadmium on microRNA Expression in NRK-52E Cells
Hanke, T.	CHS-DG	Physical Therapy	Human Odometry in Persons with Trans-tibial Amputation
Helminski, J.	CHS-DG	Physical Therapy	Differential Diagnosis of Vertical Diplopia: Paretic Eye Muscles or Misinterpretation of Gravity Signal
Keller, S.	CHS-DG	Physical Therapy	Does Social Support Enhance Exercise Training Adherence Following a Stroke? A Pilot Study
Krisjansdottir, K.	CHS-DG	Biomedical Sciences	Identifying Gene Expression Changes in Dorsal Root Ganglia on Defined Topographically Patterned Surfaces
Krzak, J.	CHS-DG	Biomedical Sciences	Utility of Essential Core Competencies in Pediatric Physical Therapy Clinical Education

TOTAL CHS-DG INTRAMURAL FUNDING: \$31,948

INTRAMURAL FUNDING

CHS-GD

Investigator/s	College	Department	Proposal Title
Andersson, E.	CHS-GD	Occupational Therapy	Student Perceptions of a Flipped Classroom for Kinesiology/Biomechanics in Physical Therapy Education
Buhlman, L.	CHS-GD	Biomedical Sciences	Identification of Alpha 6 Subunit-containing Nicotinic Acetylcholine Receptors on GABAergic Synaptic Terminals that Modulate GABA Neuron Function in the Mouse Ventral Tegmental Area
Hoover, E.	CHS-GD	Physician Assistant Studies	Mindfulness Education and Decentering Training in a Physician Assistant Curriculum
Hull, E.	CHS-GD	Biomedical Sciences	Analysis of Melanoma Markers in Excised Tumors and Circulating Tumor Cells
Hull, E.	CHS-GD	Biomedical Sciences	Analysis of Melanoma Markers in Circulating Tumor Cells
Jones, C.	CHS-GD	Biomedical Sciences	Characterization of Peripheral T-Cell Phenotype after Spinal Cord Injury in Canine Patients
*Roman, G.	CHS-GD	Physical Therapy	Training at the Minnesota Rehabilitation Biomechanics Laboratory at the University of Minnesota
Soby, S.	CHS-GD	Biomedical Sciences	Inhibition of the Dermatophytes <i>Microsporum canis</i> , <i>Epidermophyton floccosum</i> , <i>Trichophyton rubrum</i> , and <i>T. mentagrophytes</i> by Bacteria Isolated from Wild and Cultivated Cranberry Bogs

TOTAL CHS-GD INTRAMURAL FUNDING: \$34,697

CPG

Investigator/s	College	Department	Proposal Title
Huang, V.	CPG	Pharmacy Practice	Detection of Heterogeneity in <i>Staphylococcus aureus</i> Isolates: Comparing PAP-AUC of Automated vs. Manual Methods
Olsen, M.	CPG	Pharmaceutical Sciences	Design and Synthesis of Novel Aspartyl (Asparginyl)-Beta-Hydroxylase Inhibitors and Evaluation of Toxicology
Yao, M. & Elbayoumi, T.	CPG	Pharmaceutical Sciences	Investigation of Novel Recombinant CD47-coupled Pharmaceutical Preparations for Selective Attenuation of Thrombospondin 1-Induced Vascular Dysfunction

TOTAL CPG INTRAMURAL FUNDING: \$40,530

CVM

Investigator/s	College	Department	Proposal Title
Dioia, M. & Mexas, A.	CVM	Veterinary Medicine	Unraveling Pathogenic Mechanisms of Adaptive Immune Evasion by Antibiotic Resistant <i>Enterococcus faecalis</i>
Jentarra, G. & Li, W.	CVM	Veterinary Medicine	Transmission of Components of <i>Chlamydophila pneumoniae</i> through Connexon Channels and the Potential of this Microbe to Induce Pathology Characteristic of Alzheimer's Disease in Mice
Mexas, A. & Wellensiek, B.	CVM	Veterinary Medicine	Induction and Expansion of Feline Regulatory T Cells for Adoptive Immunotherapy
Wong, V. & Elbayoumi, T. (CPG)	CVM	Veterinary Medicine	Prostaglandin Reductase-2 Promotes Metastasis in Canine Hemangiosarcoma

TOTAL CVM INTRAMURAL FUNDING: \$51,000

INTRAMURAL FUNDING

MULTIDISCIPLINARY RESEARCH AWARDS

Investigator/s	Campus	Award	Proposal Title
Griffin, B. (CCP), Joshi, M. (CCP), Prozialeck, W. (CCOM), Hubka, T. (CCOM), Gulati, A. (CCP), Scheetz, M. (CCP) & Pais, G. (CCP)	Downers Grove	Multidisciplinary	Classifying and Overcoming the Risk of Fetal and Maternal Vancomycin Induced Kidney Injury: A Rat Model to Understand and New Formulation to Circumvent
Rizkalla, M. (CCOM), Heinking, K. (CCOM), Huntington-Alfano, K. (CCOM), Henderson, K. (CCOM) & Impens, A. (IHI)	Downers Grove	Multidisciplinary	Osteopathic Manipulative Treatment (OMT) Makes a Brain of a Difference: A Proof of Principle Clinical Trial on the Effectiveness of OMT in Improving Neuropsychology in Adults with Pain
Hull, E. (CHS-GD), Elbayoumi, T. (CPG), Averitte, R. (Affiliated Dermatology) & Leyva, K. (AZCOM)	Glendale	Multidisciplinary	Hyaluronic Acid-Coated Vitamin E-based Nanoemulgels for Targeted Delivery of Imiquimod Against Malignant Melanomas

TOTAL MULTIDISCIPLINARY INTRAMURAL FUNDING: \$60,000

ONE HEALTH RESEARCH AWARDS

Investigator/s	Campus	Award	Proposal Title
Wong, V. (CVM), Olsen, M. (CPG) & Richter, K. (CVM)	Glendale	One Health	Evaluation of Small Molecule Inhibitors in Human and Canine Hemangiosarcoma Cell Lines
Swanson-Mungerson, M. (CCOM) & Mayer, A. (CCOM)	Downers Grove	One Health	Investigation of the Effects of Cyanobacteria Lipopolysaccharide on Human Immune Cell Activation and Function

TOTAL ONE HEALTH INTRAMURAL FUNDING: \$20,000

**TOTAL MWU INTRAMURAL FUNDING AWARDED BY ALL COLLEGES
DURING THIS REPORTING PERIOD: \$546,319**

FY17, QUARTER #4 REPORT

UNIVERSITY-FUNDED RESEARCH SUPPORT POSITIONS BY CAMPUS**

MWU "HARD MONEY" RESEARCH SUPPORT POSITIONS		
CAMPUS	FTE	TOTAL COMPENSATION FOR REPORTING PERIOD
DOWNERS GROVE, ILLINOIS	25	\$1,599,578
GLENDALE, ARIZONA	29	\$1,636,269
TOTAL	54	\$3,235,847

****THIS INCLUDES FUNDED OR FILLED, TEMPORARY OR PERMANENT POSITIONS. THIS DOES NOT INCLUDE "SOFT MONEY" RESEARCH POSITIONS FUNDED BY GRANTS OR CONTRACTS.**

TOTAL COMPENSATION TO ALL COLLEGES FOR RESEARCH SUPPORT POSITIONS IN THIS REPORTING PERIOD IS \$3,235,847.

UNIVERSITY-FUNDED CAPITAL RESEARCH EQUIPMENT

Another manner in which MWU supports research is through consideration and funding of capital research equipment requests submitted by departments. For Fiscal Year 2017, MWU has spent \$1,208,847 on capital equipment purchases for research purposes across both campuses.

UNIVERSITY-FUNDED PER DIEM CHARGES

A way in which MWU supports research is through the waiving of animal per diem charges for those seeking extramural funding. During the current reporting period, MWU waived \$104,090 in animal per diem charges across both campuses.

UNIVERSITY-FUNDED RECAPTURED SALARIES AS "ADDITIONAL COMPENSATION"

Finally, another way that MWU supports research is through offering additional pay to faculty who receive grants which support "hard money" salary positions. When grant funds are exhausted the additional pay is eliminated. During FY17, MWU paid out \$68,694 as "Additional Compensation" to faculty Principal Investigators on grants. This payment is available to all faculty who receive extramural funding for their research, subject to the ORSP's *Recaptured Salaries on Grants* policy.

FY17, QUARTER #4 REPORT

UNIVERSITY-FUNDED STUDENT SUPPORT BY CAMPUS DURING REPORTING PERIOD

RESEARCH SUPPORT FOR STUDENTS IN DOWNERS GROVE, ILLINOIS		
ACTIVITY	NUMBER OF AWARDS	TOTAL FUNDING
RESEARCH POSTER PRINTING	258	\$13,410
TRAVEL TO PRESENT RESEARCH	14	\$5,855
FELLOWSHIPS#	42	\$170,400
TOTAL FUNDING IN SUPPORT OF STUDENT RESEARCH ACTIVITIES IN ILLINOIS		\$189,665

RESEARCH SUPPORT FOR STUDENTS IN GLENDALE, ARIZONA		
ACTIVITY	NUMBER OF AWARDS	TOTAL FUNDING
RESEARCH POSTER PRINTING	179	\$10,012
TRAVEL TO PRESENT RESEARCH	21	\$9,922
FELLOWSHIPS#	44	\$206,800
TOTAL FUNDING IN SUPPORT OF STUDENT RESEARCH ACTIVITIES IN ARIZONA		\$226,734

#Includes fellowships awarded in FY17, even though some payments are made in FY18.

ONE HEALTH STUDENT RESEARCH AWARDS

Investigator/s	Campus	Award	Proposal Title
Evans, C. (CHS-DG), Ciancio, M. (CHS-DG), Harriott, M. (CCOM), Scheetz, M. (CCP) & Smith, N. (MBS '17)	Downers Grove	One Health	A Pilot Study of Fecal Microbial Transplants from Exercised to Obese Mice
Ciancio, M. (CHS-DG), Bhavsar, P. (CDMI '17), Jarrett, D. (CDMI '17) & Virji, I. (CDMI '17)	Downers Grove	One Health	The Systematic Identification of the Best Oral Hygiene Method for Household Dogs
Mexas, A. (CVM), Mitchell, J. (CDMA) & Kline, J. (CDMA '19)	Glendale	One Health	Pet Animal Exposure to Secondhand E-cigarette Smoke
Wong, V. (CVM), Olsen, M. (CPG), Klein, M. (CVM '19) & Wong, T. (CPG '18)	Glendale	One Health	Evaluation of CXCR4 Inhibitors in Canine Hemangiosarcoma and Human Angiosarcoma

TOTAL ONE HEALTH STUDENT RESEARCH FUNDING: \$10,000

**TOTAL FUNDING IN SUPPORT OF STUDENT RESEARCH ACTIVITIES
ACROSS BOTH CAMPUSES IS \$426,399**

THE ORSP WEBSITE CAN BE FOUND AT: <http://www.midwestern.edu/orsp.html>