

ANNUAL RESEARCH REPORT

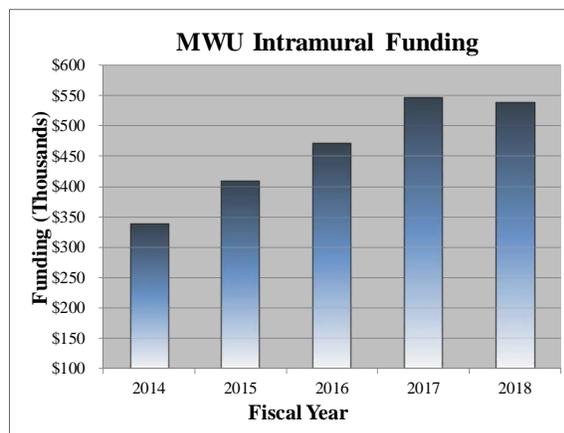
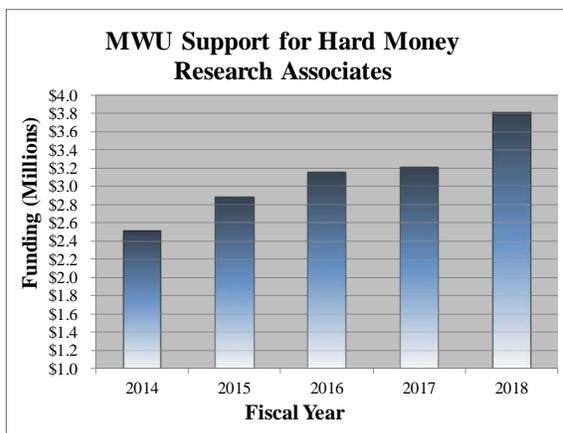
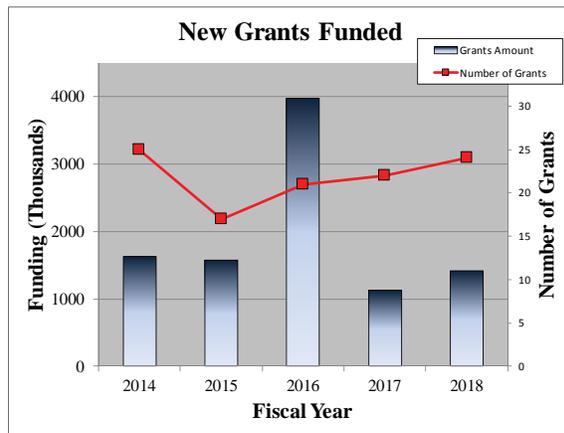
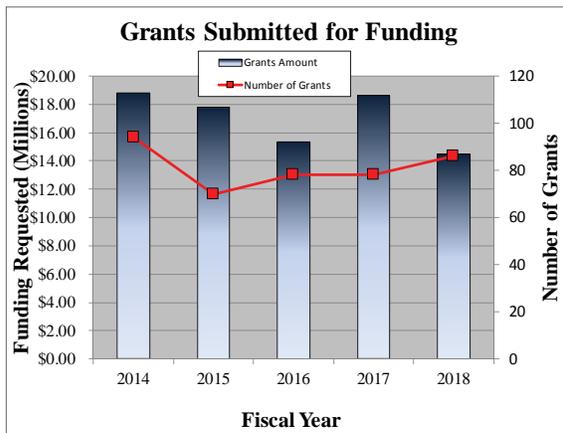
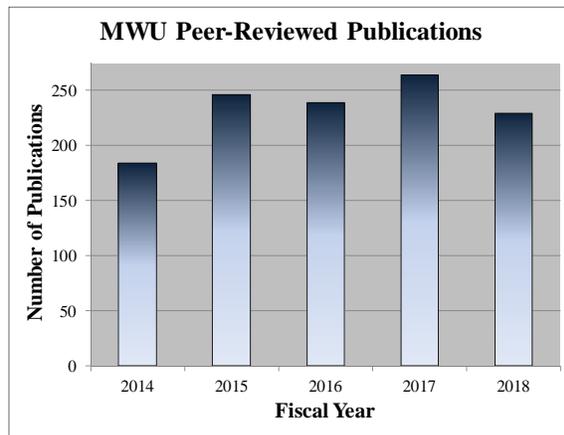
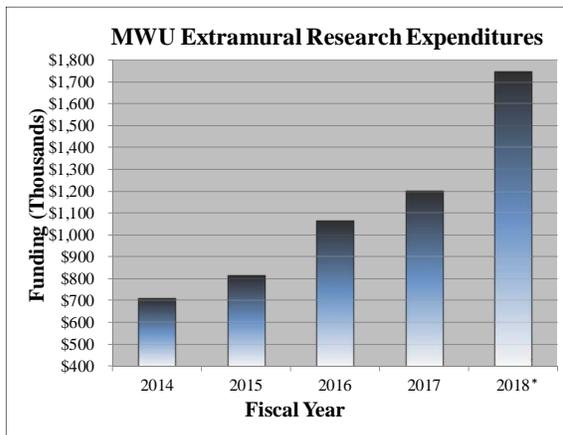
TOGETHER, WE'LL
GUIDE THE FUTURE
OF TOMORROW'S
HEALTH CARE.

OFFICE OF RESEARCH AND SPONSORED PROGRAMS

July 1, 2017 - June 30, 2018

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 2017 - 2018

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 faculty were eligible for \$49,652 in such incentives in fiscal year (FY) 2018;
- MWU provides “hard money” research technicians for faculty, including 61.3 Full Time Equivalent funded at \$3,826,428 for FY 2018;
- New faculty are provided start-up packages;
- Faculty can request capital research equipment through the university;
 - MWU purchased \$1,614,097 in capital research equipment in FY 2018;
 - 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 \$537,634 awarded in FY 2018;

Support for Student Research

- MWU makes a significant commitment to student research, demonstrated through the awarding of 107 fellowships at a total cost of \$458,050 in research stipends in FY 2019;
- MWU’s Research Days, held on each campus, had a total of 322 presentations in 2018 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 \$20,719 for printing research posters through the ORSP in FY 2018;
- 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: \$29,875 in FY 2018

Funding Success

- MWU’s extramural research expenditures for FY 2018 totaled \$1,740,077;
- MWU faculty have received more than 50 NIH grants through 2018, 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 86 proposals submitted in FY 2018 requesting \$14,442,699;
- 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 \$229,585 of waived charges in FY 2018;
- In FY 2018, MWU's ORSP offered \$9,898 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 Cactus Wren, a new building with research facilities, on our Glendale campus:
 - This building has 11,161 square feet of space dedicated to research;
 - The research-related costs of the building totaled \$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 2015;
- A new vivarium for animal research is being constructed on the Glendale campus, which will add additional research space for studying rodents, anticipated in FY 2020;

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
Eckman, D. (CHS-GD), Jones, C. (CHS-GD), Jones, T.B. (AZCOM), Vallejo-Elias, J. (AZCOM), Virden, T. (CHS-GD) & Powell, J. (CHS-GD)	CHS-GD & AZCOM	Multidisciplinary	Cerebrovascular Dysfunction and Cognitive Decline in Aging APOE2, APOE3 and APOE4 Targeted-Replacement Mice	11/30/2017	\$225,000	Arizona Department of Health Services through the Arizona Biomedical Research Commission	3/1/2018
Esfandiarei, M. (CHS-GD), Jones, T.B. (AZCOM) & Vallejo-Elias, J. (AZCOM)	CHS-GD & AZCOM	Multidisciplinary	Cardiac and Aortic Dysfunction in a Human apoE4 Mouse Model of Alzheimer's Disease	2/12/2018	\$44,887	Arizona Alzheimer's Disease Core Center	7/1/2018
Fitzgerald, N. (CDMA) & Miffiin, M. (AZCOM)	CDMA & AZCOM	Multidisciplinary	Oral Cancer Prevention for Homeless Populations	12/19/2017	\$5,000	Academy of General Dentistry Grant Foundation	1/1/2018
Kemper, L. (AZCOM) & Emerson, M. (CPG)	AZCOM & CPG	Multidisciplinary	Creating a Disaster Preparedness Program for the State of Arizona and the Southwest Region	10/31/2017	\$30,590	State Farm Community Grant Foundation	1/1/2018
Kramer, R. (CDMA) & Miffiin, M. (AZCOM)	CDMA & AZCOM	Multidisciplinary	H.O.M.E. Improvement: Enhancing our Dental Impact	9/15/2017	\$25,000	Alliance for a Cavity-Free Future	1/1/2018
Mathew, M. (CDMI) & Mitchell, J. (CDMA)	CDMI & CDMA	Multidisciplinary	Multifactorial Analysis of Dental Implant Sustainability: Retrieval Analysis, Clustering, Peri-Implantitis and Pathways of Failure	10/5/2017	\$750,000	NIH-R01 Subcontract from the University of Illinois at Chicago	7/1/2018

TOTAL OF MULTIDISCIPLINARY EXTRAMURALLY SUBMITTED PROPOSALS: \$1,080,477

ARIZONA COLLEGE OF OPTOMETRY (AZCOPT): EXTRAMURALLY SUBMITTED PROPOSALS

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Feis, A.	AZCOPT	Optometry	Binocular Dig Rush Game Treatment for Amblyopia	8/21/2017	\$11,938	National Eye Institute Cooperative Agreement with JAEB Center for Health Research, Inc.	4/10/2017
Feis, A.	AZCOPT	Optometry	A Randomized Clinical Trial of Overminus Spectacle Therapy for Intermittent Exotropia	8/21/2017	\$14,625	National Eye Institute Cooperative Agreement with JAEB Center for Health Research, Inc.	6/12/2017
Kozlowski, M.	AZCOPT	Optometry	Development of a New Class of Peptides for the Treatment of Cancer	8/9/2017	\$176,480	Elsa U. Pardee Foundation	3/1/2018
Kozlowski, M.	AZCOPT	Optometry	Effects of Commonly Experienced Exposures to Blue Light on the Physiology of Retinal Pigment Epithelial Cells	2/26/2018	\$441,678	NIH-R15	9/1/2018

AZCOPT EXTRAMURALLY SUBMITTED PROPOSALS (Continued)

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 (AMD)	6/22/2018	\$448,558	NIH-R15	4/1/2019
Putnam, N.	AZCOPT	Optometry	An Inquiry-based Approach to Teaching Sphero-Cylindrical Ametropia	7/13/2017	\$1,800	Association of Schools and Colleges of Optometry	8/28/2017

TOTAL OF AZCOPT EXTRAMURALLY SUBMITTED PROPOSALS: \$1,095,079

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	Dietary Genistein Improves Female DF508-CF Mouse Survival: How?	9/6/2017	\$216,000	Cystic Fibrosis Foundation	1/1/2018
Al-Nakkash, L.	AZCOM	Physiology	Understanding the Link Between Growth and Survival in Genistein-fed CF Mice	10/17/2017	\$375,000	NIH-R15	7/1/2018
*Al-Nakkash, L.	AZCOM	Physiology	High Fat Diet-induced Diabetes is Abolished by Combined Genistein and Exercise Treatment: Identifying the Mechanisms	4/19/2018	\$40,000	Diabetes Action Research and Education Foundation	1/1/2019
*Al-Nakkash, L.	AZCOM	Physiology	Understanding the Link Between Growth and Survival in Genistein-fed CF Mice	6/21/2018	\$375,000	NIH-R15	4/1/2019
*Al-Nakkash, L., Broderick, T. & Plochocki, J.	AZCOM	Physiology & Anatomy	Diabetic Obesity Results in Cognitive Impairment: Evaluation of the Gut and Brain in Response to Treatment with Genistein and Exercise	5/15/2018	\$15,000 (includes a \$7,500 match from MWU)	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2018
Finch, C. & Nydam, R.	AZCOM	Clinical Education & Anatomy	Multi-institutional Program for Ultrasound Based Training for Osteopathic Practitioners in Arizona	9/22/2017	\$255,830	HonorHealth Foundation Phoenix General Hospital Osteopathic Endowment Fund	1/1/2018
Griffin, M.	AZCOM	Biochemistry	Transcriptional Regulation of Adipocyte Inflammation by Early B-Cell Factor-1 (Ebf1)	2/20/2018	\$372,500	NIH-R15	9/1/2018

AZCOM EXTRAMURALLY SUBMITTED PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
*Griffin, M.	AZCOM	Biochemistry	Mechanisms of Pro-diabetic Actions of Early B-Cell Factor-1 (Ebf1) in Adipocytes	4/16/2018	\$344,070	American Diabetes Association	1/1/2019
Grossman, A.	AZCOM	Anatomy	Before We Were Human: Investigating the Interaction Between Primates and the Environment through a Paleo-Critical Zone Reconstruction of an Early Miocene Site in Western Turkana, Kenya	1/3/2018	\$3,000	National Geographic Society Subcontract from Appalachia State University	7/1/2018
Hernandez, J.	AZCOM	Biochemistry	Finding New Strategies to Combat Bacterial Urinary Tract Infections (UTIs) in Canines and Felines	3/14/2018	\$10,800	Morris Animal Foundation	8/1/2018
Jentarra, G. & Jones, T.B.	AZCOM	Biochemistry & Anatomy	Microbial Intrusion into the Brain: Is this the Cause of Alzheimer's Disease?	2/25/2018	\$444,000	NIH-R15	9/1/2018
*Jentarra, G. & Jones, T.B.	AZCOM	Biochemistry & Anatomy	Continuing Investigations into the Role of Microbes in the Development of Alzheimer's Disease	5/15/2018	\$35,000 (includes a \$17,500 match from MWU)	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2018
Jones, T.B.	AZCOM	Anatomy	Motoneuron Pool Plasticity Following Spinal Cord Injury	10/3/2017	\$5,294	NIH-R01 Subcontract from St. Joseph's Hospital and Medical Center	10/3/2017
Kemper, L.	AZCOM	Administration	Difference of Prescribing Patterns for Opioid Medications in Patients with Musculoskeletal Pain: A Study Comparing Osteopathic and Allopathic Practices	1/31/2018	\$100,000	American Osteopathic Association	6/1/2018
Lee, A., Baab, K., Georgi, J. & VandenBrooks, J.	AZCOM	Anatomy & Physiology	MRI Consortium: Acquisition of a Large-volume Micro-CT System to Stimulate Research and Training in the American Southwest	2/5/2018	\$632,517	National Science Foundation	8/1/2018
Muldoon, K.	AZCOM	Anatomy	Collaborative Research: Human and Non-human Influences on Species Biodiversity in an Island Ecosystem	7/14/2017	\$44,114	National Science Foundation	7/1/2018

AZCOM EXTRAMURALLY SUBMITTED PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
*Nydam, R., Finch, C., Al-Nakkash, L., Garner, D. (AZCOM '21), Le, A. (AZCOM '21) & Lynn, A. (AZCOM '21)	AZCOM	Anatomy, Clinical Education & Physiology	Clarius Mobile Health 2018 Medical School Award Program	6/30/2018	\$200,000 (Value of)	Clarius Mobile Health	8/1/2018
*Olson, C.	AZCOM	Physiology	Vocalizing in a Complex and Crowded Forest: An Investigation of a Unique Hummingbird Solution	4/6/2018	\$30,000	National Geographic Society	10/4/2018
*Potter, P.	AZCOM	Pharmacology	Effects of Norclozapine on Beta-amyloid in Transgenic Mice: A Potential New Treatment Option for Alzheimer's Disease?	5/15/2018	\$6,002 (includes a \$3,001 match from MWU)	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2018
Revill, A.	AZCOM	Physiology	Cholinergic Modulation of XII Motoneurons and XII Premotoneurons	12/4/2017	\$231,000	American Heart Association	7/1/2018
Riede, T.	AZCOM	Physiology	Collaborative Research: Evolution of Long-distance Communication in Vocal Rodents	8/4/2017	\$193,773	National Science Foundation	1/1/2018
*Riede, T.	AZCOM	Physiology	Integration of Breathing and Laryngeal Movements	6/20/2018	\$370,410	NIH-R15	4/1/2019
Smith, H.	AZCOM	Anatomy	Arizona Research Collection for Integrative Vertebrate Education and Study (ARCIVES): Generating AAA-branded Dissection Manuals, Atlases, and Micro-anatomical Data Repositories for Rare and Endangered Vertebrate Species	9/1/2017	\$50,000	American Association of Anatomists	1/1/2018
Townsend, K.E.B.	AZCOM	Anatomy	The Other Non-renewable Resource: Salvaging the Middle Eocene Mammalian Fossil Record in the Wake of Oil and Gas Exploration	9/25/2017	\$6,000	American Philosophical Society - Franklin Grant	7/1/2018
VandenBrooks, J.	AZCOM	Physiology	Determining the Feasibility of Vaccination as a Strategy to Curtail the Spread of RMSF in Canines	3/14/2018	\$10,800	Morris Animal Foundation	8/1/2018

TOTAL OF AZCOM EXTRAMURALLY SUBMITTED PROPOSALS: \$4,366,110

**CHICAGO COLLEGE OF OPTOMETRY (CCO):
EXTRAMURALLY SUBMITTED PROPOSALS**

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
de Gracia, P.	CCO	Optometry	Comprehending the Myopic and Presbyopic Eyes	8/1/2017	\$197,146 (includes a \$98,573 match from MWU)	American Academy of Optometry Foundation	1/1/2018

TOTAL OF CCO EXTRAMURALLY SUBMITTED PROPOSALS: \$197,146

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

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Porta, M.	CCOM	Physiology	The Epigenetic Memory of Pregnancy in the Uterus: Myometrial Contractility	10/25/2017	\$426,770	NIH-R15	7/1/2018
Rizkalla, M. & Henderson, K.	CCOM	Clinical Education & Physiology	Does Osteopathic Manipulative Treatment (OMT) Make a Brain of Difference? A Clinical Study on the Efficacy of OMT in Improving Neuropsychology in Adults with Chronic Pain	10/25/2017	\$440,517	NIH-R15	7/1/2018
Strizzi, L.	CCOM	Pathology	Anti-melanoma Effects of Novel Cripto-1 CFC Small Peptide Mimetics	8/31/2017	\$79,911	Elsa U. Pardee Foundation	1/1/2018
*Strizzi, L.	CCOM	Pathology	The Role of Neural Guidance Molecules in Metastatic Spread of Melanoma	4/16/2018	\$101,345	Elsa U. Pardee Foundation	10/1/2018
Swanson-Mungerson, M.	CCOM	Microbiology & Immunology	Investigation of Ibrutinib Efficacy in EBV-associated Lymphomas	9/29/2017	\$449,586	NIH-R15	7/1/2018
*Swartzendruber, J.	CCOM	Microbiology & Immunology	Suppression of Mast Cell Activation by Exopolysaccharide Produced by <i>Bacillus subtilis</i>	5/30/2018	\$1,000 (Value of)	ACEA Biosciences, Inc.	7/1/2018
Velez-Cruz, R.	CCOM	Biochemistry	The Role of SWI/SNF Complexes in Homologous Recombination	10/25/2017	\$445,266	NIH-R15	7/1/2018

TOTAL OF CCOM EXTRAMURALLY SUBMITTED PROPOSALS: \$1,944,395

CHICAGO COLLEGE OF PHARMACY (CCP): EXTRAMURALLY SUBMITTED PROPOSALS

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Bhalla, S.	CCP	Pharmaceutical Sciences	Signaling Mechanisms Involved in Endothelin-A Receptor Mediated Attenuation of Opioid Tolerance and Withdrawal	10/25/2017	\$450,000	NIH-R15	7/1/2018
Briyal, S.	CCP	Pharmaceutical Sciences	Defining the Mechanism of ETB Receptor Mediated Neurogenesis and Synaptogenesis in Alzheimer's Disease	2/25/2018	\$450,000	NIH-R15	9/1/2018
*Gulati, A.	CCP	Pharmaceutical Sciences	Toxicity and Toxicokinetic Studies to Develop PMZ-2123 as a Novel Agent to Treat Opioid Tolerance	4/5/2018	\$23,376	NIH-SBIR Subcontract from Pharmazz, Inc.	9/1/2018
*Joshi, M. & Griffin, B.	CCP	Pharmaceutical Sciences & Pharmacy Practice	Elucidation of a Safe Vancomycin Dosing Scheme Based on Fetal and Maternal Vancomycin-induced Kidney Injury During Pregnancy	6/25/2018	\$450,000	NIH-R15	4/1/2019
McLaughlin, M.	CCP	Pharmacy Practice	Factors Influencing Pharmacy Student Pursuit of Research During Pharmacy School	8/31/2017	\$7,800	American Association of Colleges of Pharmacy	2/1/2018
Rhodes, N.J.	CCP	Pharmacy Practice	A United States Based Program to Evaluate the <i>In Vitro</i> Potency of Gram-Negative Therapies Against Contemporary <i>P. aeruginosa</i>	1/22/2018	\$800	Center for Anti-Infective Research and Development of Hartford Hospital	2/16/2018
*Rhodes, N.J.	CCP	Pharmacy Practice	Whole-genome Sequence-based Characterization and Prediction of Antibiotic Resistance in <i>Pseudomonas aeruginosa</i>	6/5/2018	\$98,320	NIH-R01 Subcontract from Northwestern University	4/1/2019
Scheetz, M.	CCP	Pharmacy Practice	Novel Antimicrobial Approach for Multidrug-Resistant Bacterial Infections in Diabetes	10/26/2017	\$13,333	University of Chicago NIDDK/NIH-sponsored Diabetes Research and Training Center Subcontract from Northwestern University	2/1/2018
Scheetz, M.	CCP	Pharmacy Practice	Elucidation of an Informed Drug Dosing Scheme to Minimize Kidney Injury	2/25/2018	\$464,291	NIH-R15 with a Subcontract to Albany College of Health Sciences	9/1/2018

CCP EXTRAMURALLY SUBMITTED PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
*Scheetz, M.	CCP	Pharmacy Practice	Understanding the Mechanism of Additive Renal Toxicity with Vancomycin and Piperacillin-Tazobactam	6/18/2018	\$412,500	NIH-R21	4/1/2019
Tran, T. & Cornell, S.	CCP	Pharmacy Practice	MWU Nalox-nov Program	8/15/2017	\$2,993	National Association of Boards of Pharmacy	11/1/2017

TOTAL OF CCP EXTRAMURALLY SUBMITTED PROPOSALS: \$2,373,413

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

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Mitchell, J.	CDMA	Dental	Physical and Mechanical Properties of a New Composite Material for Dental Prostheses	11/1/2017	\$10,000	Beijing JingCi Medical Equipment Limited Company	11/1/2017
*Smith, B. & Beals, D.	CDMA	Dental	A Partnership Protocol for Treatment of Oral Mucositis Using LLLT	5/23/2018	\$25,000	Dental Trade Alliance Foundation	10/1/2018

TOTAL OF CDMA EXTRAMURALLY SUBMITTED PROPOSALS: \$35,000

COLLEGE OF DENTAL MEDICINE ILLINOIS (CDMI): EXTRAMURALLY SUBMITTED PROPOSALS

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Fernandez, G.C.	CDMI	Dental	Targeted Interventions to Increase Preventative Oral Health Awareness at Illinois Community Health Centers	9/15/2017	\$19,159	Alliance for a Cavity-Free Future	11/1/2017

TOTAL OF CDMI EXTRAMURALLY SUBMITTED PROPOSALS: \$19,159

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

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
*Krazk, J.	CHS-DG	Physical Therapy	Disability and Rehabilitation Research Projects (DRRP) to Improve Post-Intervention Foot and Ankle Health and Function in Individuals with Cerebral Palsy	4/23/2018	\$205,175	Department of Health and Human Services, Administration for Community Living Subcontract from Marquette University	9/30/2018
*Krazk, J.	CHS-DG	Physical Therapy	Planning Grant: Engineering Research Center (ERC) for <i>In Vivo</i> Joint Biomechanics - OREC	6/6/2018	\$7,729	National Science Foundation	11/1/2017
*Prodoehl, J.	CHS-DG	Physical Therapy	The Effect of Head Position Three Dimensional Temporomandibular Joint Motion and Muscle Activation Patterns	4/1/2018	\$2,000	American Physical Therapy Association Section on Research	5/15/2018

TOTAL OF CHS-DG EXTRAMURALLY SUBMITTED PROPOSALS: \$214,904

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

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Eikenberry, M.	CHS-GD	Physical Therapy	Robotic Balance Training for Stroke Rehabilitation Based on Characterization of Multi-Dimensional Ankle Mechanics	10/20/2017	\$12,366	National Science Foundation Subcontract from Arizona State University	5/1/2019
Eikenberry, M.	CHS-GD	Physical Therapy	Development of a New Robotic Approach to Quantify the Ankle Neuromechanics in the Control of Postural Balance Post-Stroke	11/16/2017	\$4,430	NIH-R03 Subcontract from Arizona State University	7/1/2019
*Eikenberry, M.	CHS-GD	Physical Therapy	Development of a New Robotic Approach to Quantify the Ankle Neuromechanics in the Control of Postural Balance Post-Stroke	6/15/2018	\$4,439	NIH-R03 Subcontract from Arizona State University	4/1/2019
Esfandiarei, M.	CHS-GD	Biomedical Sciences	Targeting Endothelial Dysfunction in a Genetic Mouse Model of Aortic Aneurysm: Implications for Prevention and Therapy	2/26/2018	\$441,048	NIH-R15	9/1/2018

CHS-GD EXTRAMURALLY SUBMITTED PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Hoseini, N.	CHS-GD	Physical Therapy	The Effect of Transcranial Direct Current Stimulation (tDCS) Combined with Functional Electrical Stimulation (FES) on Upper Extremity Function in Patients with Stroke: A Pilot Study	8/3/2017	\$37,415	Foundation for Physical Therapy	1/1/2018
*O'Neal, S.	CHS-GD	Physical Therapy	The Effect of Backward Cycling on Posterior Protective Stepping Responses in People with Parkinson Disease	5/11/2018	\$1,492	LSVT Global	6/1/2018
Soby, S.	CHS-GD	Biomedical Sciences	Bacteria and Fungi of the Wild Cranberry Bogs in the Cape Cod National Seashore	3/19/2018	\$4,000	Cape Cod National Seashore and Friends of the Cape Cod National Seashore - Nickerson Fellowship	6/1/2018

TOTAL OF CHS-GD EXTRAMURALLY SUBMITTED PROPOSALS: \$505,190

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

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
*Bowman, B. & Raney, E.	CPG	Pharmaceutical Sciences & Pharmacy Practice	Impact of a Student Leadership Development Program Upon Emotional Intelligence	4/30/2018	\$2,357	American Association of Colleges of Pharmacy - Scholarship of Teaching and Learning Grant	8/1/2018
Peckham, A. & Colisto, A. (CPG '20)	CPG	Pharmacy Practice	Safe Opioid Prescribing Course Effect on Opioid Overdose Knowledge and Attitude Scales Across Multidisciplinary Students	8/31/2017	\$1,500	College of Psychiatric & Neurologic Pharmacists Foundation	10/1/2017
Yao, M.	CPG	Pharmaceutical Sciences	Development of Novel Recombinant CD47-Coupled Pharmaceutical Preparations for Selective Abrogation of Thrombospondin 1-induced Detrimental Effects	11/30/2017	\$225,000	Arizona Biomedical Research Commission	3/1/2018

CPG EXTRAMURALLY SUBMITTED PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Yao, M. & Elbayoumi, T.	CPG	Pharmaceutical Sciences	Novel Therapeutic Strategy for Pulmonary Arterial Hypertension: Abrogation of Excess Thrombospondin 1 by Pharmaceutical Formula of CD47 Peptide	10/12/2017	\$80,558	Cardiovascular Medical Research and Education Fund	1/1/2018
Yao, M. & Elbayoumi, T.	CPG	Pharmaceutical Sciences	Atrial Fibrillation Strategically Focused Research Network: Atrial Substrate in Atrial Fibrillation and AF-associated Brain Disease	1/31/2018	\$126,979	American Heart Association Subcontract from Northwestern University	7/1/2018

TOTAL OF CPG EXTRAMURALLY SUBMITTED PROPOSALS: \$436,394

COLLEGE OF VETERINARY MEDICINE (CVM): EXTRAMURALLY SUBMITTED PROPOSALS

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
*Bouwer, A.	CVM	Veterinary Medicine	Veterinary Services Grant Program: Food Animal Extension and Educational Support Partnership	5/18/2018	\$247,321	USDA NIFA	1/1/2019
Brosnahan, M.	CVM	Veterinary Medicine	Non-invasive Health Profiling and Community Perceptions of Wild Horses in Arizona	7/12/2017	\$10,800	Morris Animal Foundation	12/1/2017
Goetz, N.	CVM	Veterinary Medicine	Recurrence of Malignant Mammary Tumors in Dogs	3/14/2018	\$92,014	Morris Animal Foundation	7/6/2018
Lee, J.	CVM	Veterinary Medicine	Bioengineered Skin Sealants	2/20/2018	\$142,014	NIH-R01 Subcontract from Arizona State University	9/1/2018
Lee, J.	CVM	Veterinary Medicine	Polo-like Kinase 1 Inhibitors and their Nanoparticle Derivatives for Bladder Cancer Treatment	3/2/2018	\$19,296	NIH-R21 Subcontract from Arizona State University	8/1/2018
Lee, J.	CVM	Veterinary Medicine	Molecular Engineering of Radiation Responsive Biomaterials	3/23/2018	\$71,007	NIH-R01 Subcontract from Arizona State University	9/1/2020
Murthy, A.	CVM	Veterinary Medicine	Chlamydial Pathogenicity - A Two-hit Mouse Model	7/15/2017	\$88,395	NIH-R01 Subcontract from the University of Texas Health Science Center at San Antonio	4/1/2018

CVM EXTRAMURALLY SUBMITTED PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Murthy, A.	CVM	Veterinary Medicine	Boehringer Ingelheim Veterinary Scholars Program	10/31/2017	\$20,000	Boehringer Ingelheim	6/1/2018
Thangamani, S.	CVM	Veterinary Medicine	Biotransformation of Anticancer Drugs by Gut Fungi	10/24/2017	\$464,225	NIH-R15 with a Subcontract to Purdue University	7/1/2018
*Thangamani, S.	CVM	Veterinary Medicine	Role of Bile Acids in the Gastrointestinal Colonization of <i>Candida albicans</i>	6/25/2018	\$464,257	NIH-R15 with a Subcontract to Purdue University	4/1/2019

TOTAL OF CVM EXTRAMURALLY SUBMITTED PROPOSALS: \$1,619,329

INSTITUTE FOR HEALTHCARE INNOVATION (IHI): EXTRAMURALLY SUBMITTED PROPOSALS

Investigator/s	College	Department	Proposal Title	Date Submitted	Total	Agency	Start Date
Woods, C.	Glendale	IHI	Extraction and Characterization of a Safer, Cost-effective Anti-inflammatory	9/5/2017	\$312,319	NIH-STTR Subcontract from Botanisol, LLC	4/1/2018
*Woods, C.	Glendale	IHI	Extraction and Characterization of a Safer, Cost-effective Anti-inflammatory	4/6/2018	\$243,784	NIH-STTR Subcontract from Botanisol, LLC	1/21/2019

TOTAL OF IHI EXTRAMURALLY SUBMITTED PROPOSALS: \$556,103

**MWU SUBMITTED 86 EXTRAMURAL PROPOSALS FROM ALL COLLEGES
THROUGH Q4 OF FISCAL YEAR 2018: \$14,442,699**

*The asterisk denotes new material. All material in this report is cumulative from July 1, 2017 through June 30, 2018.

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

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
*Eckman, D. (CHS-GD), Jones, C. (CHS-GD), Jones, T.B. (AZCOM), Vallejo-Elias, J. (AZCOM), Virden, T. (CHS-GD) & Powell, J. (CHS-GD)	CHS-GD & AZCOM	Multidisciplinary	Cerebrovascular Dysfunction and Cognitive Decline in Aging APOE2, APOE3 and APOE4 Targeted-Replacement Mice	\$225,000	Arizona Department of Health Services through the Arizona Biomedical Research Commission	4/1/2018	3/31/2021

TOTAL OF MULTIDISCIPLINARY ACTIVE
EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$225,000

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
Al-Nakkash, L., Broderick, T. & Plochocki, J.	AZCOM	Physiology & Anatomy	Diabetic Obesity Results in Cognitive Impairment: Evaluation of Gut, Brain and Bone Effects in Response to Exercise and Genistein Treatment	\$25,598 (includes a \$12,799 match from MWU)	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2017	6/30/2018
Bae, N. & Swanson, M.	AZCOM	Biochemistry	Investigating the Differences Between Ape and Human FGP Proteins Involved in Neurodegeneration	\$9,300 (includes a \$4,650 match from MWU)	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2017	6/30/2018
Finch, C. & Nydam, R.	AZCOM	Clinical Education & Anatomy	Multi-Institutional Program for Ultrasound Based Training for Osteopathic Practitioners in Arizona	\$217,456	HonorHealth Foundation Phoenix General Hospital Osteopathic Endowment Fund	1/1/2018	12/31/2018
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
Jentarra, G., Potter, P., Tullo, T., Kaufman, J., Vallejo, J., Jones, D. & Jones, T.B.	AZCOM	Biochemistry, Pharmacology, Physiology & Anatomy	The Role of Infection in the Development and Pathological Features of Alzheimer's Disease	\$33,000 (includes a \$16,500 match from MWU)	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2017	6/30/2018
Jones, T.B.	AZCOM	Anatomy	Motoneuron Pool Plasticity Following Spinal Cord Injury	\$5,294	NIH-R01 Subcontract from St. Joseph's Hospital and Medical Center	10/3/2017	6/30/2018

AZCOM ALL ACTIVE RESEARCH AWARDS (Continued)

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Kemper, L.	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
Kemper, L.	AZCOM	Administration	The Value of Osteopathic Clinical Care: A Multi-Level Analysis	\$81,119	American Osteopathic Association	9/1/2016	2/28/2018
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 Recherchers 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	10/16/2017
Muldoon, K.	AZCOM	Anatomy	Collaborative Research: Human and Non-human Influences on Species Biodiversity in an Island Ecosystem	\$44,144	National Science Foundation	3/1/2018	2/21/2021
Riede, T.	AZCOM	Physiology	The Evolution of Avian Vocalization	\$177,111	Gordon and Betty Moore Foundation Subcontract from The University of Texas at Austin with a Subcontract to Brigham Young University	11/1/2014	9/1/2018
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: \$1,693,918

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	12/31/2018
Feis, A.	AZCOPT	Optometry	Binocular Dig Rush Game Treatment for Amblyopia	\$11,938	National Eye Institute Cooperative Agreement with JAEB Center for Health Research, Inc.	4/10/2017	12/31/2018

AZCOPT ALL ACTIVE RESEARCH AWARDS (Continued)

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Feis, A.	AZCOPT	Optometry	A Randomized Clinical Trial of Overminus Spectacle Therapy for Intermittent Exotropia	\$14,625	National Eye Institute Cooperative Agreement with JAEB Center for Health Research, Inc.	6/12/2017	12/12/2018
Kozlowski, M.	AZCOPT	Optometry	Antiproliferative Activity of a New Class of Peptides	\$72,200	Kalos Therapeutics	6/12/2017	6/11/2018
Putnam, N.	AZCOPT	Optometry	An Inquiry-based Approach to Teaching Sphero-Cylindrical Ametropia	\$1,800	Association of Schools and Colleges of Optometry	8/28/2017	12/29/2018

TOTAL OF AZCOPT ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$106,188

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	9/15/2018

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	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
Edwards, J.	CCOM	Pharmacology	Mechanisms of Cadmium-induced Dysglycemia	\$446,697	NIH-R15	8/15/2017	7/31/2020
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	6/30/2019
Mejia-Alvarez, R.	CCOM	Physiology	Control of IP ₃ -mediated Calcium Release	\$122,504	NIH-R01 Subcontract from Rush University Medical School	4/1/2015	5/31/2019
Ramsey, K.	CCOM	Microbiology & Immunology	Isolation of Novel Rodent Chlamydiae	\$422,488	NIH-R21	4/1/2016	3/31/2019

CCOM ALL ACTIVE RESEARCH AWARDS (Continued)

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
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: \$2,169,279

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
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
Gulati, A.	CCP	Pharmaceutical Sciences	Toxicokinetics and Toxicity of Centaquin in Dogs	\$23,616	NIH-SBIR Subcontract from Pharmazz, Inc.	8/20/2017	5/19/2018
Rhodes, N. J.	CCP	Pharmacy Practice	A United States Based Program to Evaluate the <i>In Vitro</i> Potency of Gram-Negative Therapies Against Contemporary <i>P. aeruginosa</i>	\$800	Center for Anti-Infective Research and Development of Hartford Hospital	2/16/2018	8/15/2018
Scheetz, M.	CCP	Pharmacy Practice	Patient-oriented Research on Hospital-acquired Pathogens	\$36,331	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
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	1/1/2019
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

CCP ALL ACTIVE RESEARCH AWARDS (Continued)

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End 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	\$159,835	Merck Sharp & Dohme Corp. with a Subcontract to the University of Michigan and Wayne State University	9/13/2017	9/12/2019
Scheetz, M.	CCP	Pharmacy Practice	A Pilot Study to Define Colistin Population PK and Interrogate Renal TD	\$32,400	Cystic Fibrosis Foundation Subcontract from Northwestern University	11/1/2017	10/31/2019
Schumacher, C.	CCP	Pharmacy Practice	MEDication Focused Outpatient Care for Underutilization of Secondary Prevention	\$76,004	NIH-R18 Subcontract from the University of Iowa	4/1/2014	3/31/2018
Tran, T.	CCP	Pharmacy Practice	MWU Nalox-nov Program	\$2,000	National Association of Boards of Pharmacy	11/1/2017	6/30/2018
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: \$960,448

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

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Mitchell, J.	CDMA	Dental	Physical and Mechanical Properties of a New Composite Material for Dental Prostheses	\$10,000	Beijing JingCi Medical Equipment Limited Company	11/1/2017	2/23/2018

TOTAL OF CDMA ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$10,000

**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
Anderson, D.	CHS-DG	Physical Therapy	Excellence in Pediatric Physical Therapy Education	\$526	Academy of Pediatric Physical Therapy, American Physical Therapy Association Subcontract from Creighton University	3/24/2017	1/1/2018
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
*Prodoehl, J.	CHS-DG	Physical Therapy	The Effect of Head Position Three Dimensional Temporomandibular Joint Motion and Muscle Activation Patterns	\$2,000	American Physical Therapy Association Section on Research	5/15/2018	5/14/2019

TOTAL OF CHS-DG ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$1,159,805

**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
Eckman, D., Jones, C. & Powell, J.	CHS-GD	Biomedical Sciences & Behavioral Sciences	Cerebrovascular Function in APOE3 and APOE4 Targeted-Replacement Mice	\$9,078 (includes a \$4,539 match from MWU)	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2017	6/30/2018
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	6/30/2018
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: \$114,562

**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
*Olsen, M.	CPG	Pharmaceutical Sciences	Developing a Safe and Effective Combined Anticoronaviral Therapy (CACT) for Cats with FIP	\$6,000	Winn Feline Foundation Subcontract from the University of California-Davis	12/1/2017	11/30/2018
Peckham, A. & Colisto, A. (CPG '20)	CPG	Pharmacy Practice	Safe Opioid Prescribing Course Effect on Opioid Overdose Knowledge and Attitude Scales Across Multidisciplinary Students	\$1,500	College of Psychiatric & Neurologic Pharmacists Foundation	10/1/2017	4/25/2018
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 University of Arizona	6/5/2017	5/31/2019
Yao, M. & Elbayoumi, T.	CPG	Pharmaceutical Sciences	Novel Therapeutic Strategy for Pulmonary Arterial Hypertension: Abrogation of Excess Thrombospondin 1 by Pharmaceutical Formula of CD47 Peptide	\$96,670	Cardiovascular Medical Research and Education Fund	11/1/2017	10/31/2019

TOTAL OF CPG ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$127,501

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

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Lee, J.K.	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.	CVM	Veterinary Medicine	Mechanism(s) of CD8 ⁺ T Cell-mediated Chlamydia-induced Reproductive Pathology	\$450,000	NIH-R15	7/1/2016	6/30/2019
Murthy, A.	CVM	Veterinary Medicine	Meril Veterinary Scholarship Program	\$10,000	Meril	7/1/2017	9/30/2017

CVM ALL ACTIVE RESEARCH AWARDS (Continued)

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
*Murthy, A.	CVM	Veterinary Medicine	Boehringer Ingelheim Veterinary Scholarship Program	\$20,000 (includes a \$10,000 match from MWU)	Boehringer Ingelheim	6/1/2018	9/30/2018
*Murthy, A.	CVM	Veterinary Medicine	MWU-PSC Student Summer Fellowship	\$5,000	PetSmart Charities, Inc.	6/1/2018	9/30/2018

TOTAL OF CVM ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS: \$569,376

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	12/31/2017
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: \$7,171,454

ALL OTHER ACTIVE EXTRAMURALLY-FUNDED AWARDS DURING THE REPORTING PERIOD

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Burrows, T.	CHS-GD	Nurse Anesthesia Program	Nurse Anesthetist Traineeships	\$33,163	Health Resources and Services Administration	7/1/2017	6/30/2018
Shamblen, 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: \$930,619

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: \$8,102,073

*The asterisk denotes new material. All material in this report is cumulative from July 1, 2017 through June 30, 2018.

***Browar AW** (CDMI), **Koufos EB** (CDMI), **Wei Y** (CDMI), **Leavitt LL** (CDMI), **Prozialeck WC** (CCOM) & **Edwards JR** (CCOM). (2018) Cadmium exposure disrupts periodontal bone in experimental animals: Implications for periodontal disease in humans. *Toxics* June 13:epub ahead of print.

Cackovic J (AZCOM), **Gutierrez-Luke S** (AZCOM), **Call GB** (AZCOM), **Juba A** (CHS-GD), **O'Brien S** (AZCOM), **Jun CH** (AZCOM) & **Buhlman LM** (CHS-GD). (2018) Vulnerable Parkin loss-of-function *Drosophila* dopaminergic neurons have advanced mitochondrial aging, mitochondrial network loss and transiently reduced autophagosome recruitment. *Frontiers in Cellular Neuroscience* February 15:epub ahead of print.

Edwards JR (CCOM), **Fossum TW** (AZCOM), **Nichols KJ** (CCOM), **Noah DL** (AZCOM), **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.

***Fay MJ** (CCOM), **Alt LAC** (CHS-DG), **Ryba D** (CHS-DG), **Salamah R** (CHS-DG), **Peach R** (CHS-DG), **Papaeliou A** (CHS-DG), **Zawadzka S** (CHS-DG), **Weiss A** (CHS-DG), **Patel N** (CHS-DG), **Rahman A** (CHS-DG), **Stubbs-Russell Z** (CHS-DG), **Lamar PC** (CCOM), **Edwards JR** (CCOM) & **Prozialeck WC** (CCOM). (2018) Cadmium nephrotoxicity is associated with altered microRNA expression in the rat renal cortex. *Toxics* 6:16.

Griffin BL (CCP), **Stone RH**, **El-Ibiary SY** (CPG), **Westberg S**, **Shealy K**, **Forinash A**, **Yancey A**, **Vest K** (CCP), **Karaoui LR**, **Rafie S**, **Horlen C**, **Lodise N**, **Cieri-Hutcherson N**, **McBane S** & **Simonyan A**. (2018) Guide for drug selection during pregnancy and lactation: What pharmacists need to know for current practice. *Annals of Pharmacotherapy* March 9:epub ahead of print.

Jones JL (CVM), **Rinehart J** (AZCOM), **Spiegel JJ** (CHS-GD), **Englar RE** (CVM), **Sidaway BK** (CVM) & **Rowles J** (CPG). (2017) Development of veterinary anesthesia simulations for pre-clinical training: Design, implementation, and evaluation based on student perspectives. *Journal of Veterinary Medical Education* September 29:epub ahead of print.

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PATENTS ISSUED AND PUBLISHED

Anil Gulati (CCP)

Title: Methods and Compositions for Hypotensive Resuscitation

Inventors: Gulati A (Naperville, IL), Lavhale MS (Amravati, India), Andurkar SV (Naperville, IL)

European Patent Number: 2890376

Date Issued: September 27, 2017

***Anil Gulati** (CCP)

Title: Novel Therapeutic Treatments Using Centhaquin

Inventors: Gulati A (Naperville, IL)

Canadian Patent Number: 2759791

Date Issued: April 10, 2018

PATENTS ISSUED AND PUBLISHED (Continued)

***Anil Gulati** (CCP)

Title: Methods for Treatment of Stroke or Cerebrovascular Accidents Using an ETB Receptor Agonist

Inventors: Gulati A (Naperville, IL)

Canadian Patent Number: 2696398

Date Issued: May 8, 2018

Mark Olsen (CPG)

Title: Inhibitors of Beta-Hydroxylase for Treatment of Cancer

Inventors: Wands JR (East Greenwich, RI), De La Monte S (East Greenwich, RI), Aihara A (Providence, RI), Olsen MJ (Phoenix, AZ), Thomas J-M (Glendale, AZ)

U.S. Patent Number: 9,771,356

Date Issued: September 26, 2017

Mark Olsen (CPG)

Title: Inhibitors of Beta-Hydroxylase for Treatment of Cancer

Inventors: Wands JR (East Greenwich, RI), De LaMonte S (East Greenwich, RI), Aihara A (Providence, RI), Olsen MJ (Phoenix, AZ), Thomas J-M (Glendale, AZ)

European Patent Number: EP2897607B1

Date Issued: November 22, 2017

*The asterisk denotes new material. All material in this report is cumulative from July 1, 2017 through June 30, 2018.

INTRAMURAL FUNDING

AZCOM

Investigator/s	College	Department	Proposal Title
Al-Nakkash, L.	AZCOM	Physiology	Sex-dependent Effects of Dietary Genistein on Survival Rates and Weight Gain in the DF508-CF Mouse
Broderick, T.	AZCOM	Physiology	Oxytocin and Exercise for the Treatment of Diabetic Cardiomyopathy
Call, G.	AZCOM	Pharmacology	Reproducing an Ischemia/Reperfusion Injury Model in <i>Drosophila melanogaster</i>
Gonzalez, F.	AZCOM	Microbiology & Immunology	Interactions Between Candida species and Oral Microbiota
Griffin, M. J.	AZCOM	Biochemistry	Role of Early B-Cell Factor-1 (Ebf1) in Adipocyte Inflammation
Grossman, A.	AZCOM	Anatomy	Fossils From New Early Miocene Localities in Israel: Implications for the Role of the Levantine Corridor in Shaping the Modern Biotic Interchange between Africa and Eurasia
Jensen, L. A.	AZCOM	Microbiology & Immunology	Methylobacterium Contamination
Jones, D. C.	AZCOM	Pharmacology	Characterization of Muscarinic Receptor Uncoupling in Alzheimer's Disease
Kaufman, J. A.	AZCOM	Anatomy	Comparison of A β Isoform Levels in Mouse Models of Alzheimer's Disease and Down Syndrome
Lawson, K.	AZCOM	Biochemistry	The Role of P-cadherin in Tumor Progression
Lee, A. H.	AZCOM	Anatomy	Skeletal Distribution of Estrogen Receptor Alpha in Avian Medullary Bone
Leyva, K. J.	AZCOM	Microbiology & Immunology	Characterization of miRNAs Influencing the Progression of EMT in Cutaneous Squamous Cell Carcinoma
Nydam, R. L.	AZCOM	Anatomy	Investigating the Neurovascular Supply Patterns of the Alveoli of Extant and Extinct Snake
Plochocki, J. H.	AZCOM	Anatomy	Does Treatment with Exercise and Resveratrol Improve Bone Health in Alzheimer's Disease?
Potter, P. E.	AZCOM	Pharmacology	Muscarinic Receptor Antagonists in an Animal Model of Alzheimer's Disease
Simons, E.	AZCOM	Anatomy	How Does Evolution of Flightlessness Influence the Bone Laminarity of Birds
Smith, H. F.	AZCOM	Anatomy	First Fossil Turtles Described from the Arlington Archosaur Site, Woodbine Formation (Cenomanian, Late Cretaceous)
Townsend, K. E. B.	AZCOM	Anatomy	The MECO Revealed: Uncovering the Terrestrial Middle Eocene Hypothermal Event
Vallejo-Elias, J.	AZCOM	Physiology	The Role of Caveolin-1 in the Progression of Aortic Aneurysm in a Mouse Model of Marfan Syndrome

TOTAL AZCOM INTRAMURAL FUNDING: \$83,006

INTRAMURAL FUNDING

AZCOPT

Investigator/s	College	Department	Proposal Title
Baker, J.	AZCOPT	Optometry	Is Occupational Exposure to Blue Light Harmful to Dentists?
Kozlowski, M.	AZCOPT	Optometry	Evaluation of the Effect of Blue Light Exposure on Lysosomal Functioning in RPE Cells
Kozlowski, M.	AZCOPT	Optometry	<i>In Vivo</i> Evaluation of New Classes of Compounds for the Treatment of Dry AMD
Putnam, N.	AZCOPT	Optometry	Retinal Imaging and Eye Tracking of Human Subjects Using Tracking Scanning Laser Ophthalmoscopy (TSLO) at the Arizona College of Optometry
Thomas, S.	AZCOPT	Optometry	Non-invasive Breakup Time, Visual Acuity, and OSDI Survey of Soft Contact Lens Wearers Using Refresh Optive Mega-3
Vasudevan, B. & Helmuth, K.	AZCOPT	Optometry	Effectiveness of Lipiflow vs. IPL in the Treatment of Dry Eye

TOTAL CCO INTRAMURAL FUNDING: \$31,697

CCO

Investigator/s	College	Department	Proposal Title
Haron, N. M.	CCO	Optometry	Comparing Smartphone-Based Refraction (NETRA) with Auto-Refractive Devices Under Cycloplegia
*Deligio, D.	CCO	Optometry	Rigid Gas Permeable Contact Lens Efficient Antiseptic Routine (RGP CLEAR) Discovery and Optimization

TOTAL CCO INTRAMURAL FUNDING: \$8,993

CCOM

Investigator/s	College	Department	Proposal Title
Chandar, N.	CCOM	Biochemistry	Role of Retinoblastoma Gene in the Regulation of Osteoblast Transcription Factor Osterix
Dineley, K.	CCOM	Pharmacology	Determining the Effects of the Polybrominated Diphenyl Ether BDE-47 on Glycolysis, Using Lysates of HAC15 Adrenocortical Cells
Edwards, J.	CCOM	Pharmacology	Mechanisms of Cadmium-induced Hyperglycemia and Hypoinsulinemia
Goral, J.	CCOM	Anatomy	Effects of Diet and Gender on 4-NQO-induced Histopathological Changes in Various Organs; Role of Inflammation
Green, J.	CCOM	Biochemistry	Analysis of Expression of Inflammatory Proteins and Folate Transporters in a Mouse Model of Oral Cancer
LePard, K. J.	CCOM	Physiology	Dynamic Glucose Transport by Intestine and Pancreas
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
O'Hagan, K.	CCOM	Physiology	Effect of Exercise and High Fat Diet on Skeletal Muscle miR133a
Plotkin, B. J.	CCOM	Microbiology & Immunology	Characterization of Mammalian Cells Under Anoxic Conditions: Physiology, Morphology, and Susceptibility to Pathogens and Chemotherapeutic Agents
Porta, M.	CCOM	Physiology	The Memory of Pregnancy of the Uterus: Contractility
Ramsey, K.	CCOM	Microbiology & Immunology	Genomic Variation and Chlamydial Variation

TOTAL CCOM INTRAMURAL FUNDING: \$67,675

INTRAMURAL FUNDING

CCP

Investigator/s	College	Department	Proposal Title
Andurkar, S.	CCP	Pharmacy Practice	Probing the Mechanism of the Endothelin-Opioid Functional Interactions
Briyal, S.	CCP	Pharmacy Practice	ETB Receptor Mediated Neurogenesis and Synaptogenesis in Alzheimer's Disease
Griffin, B.	CCP	Pharmacy Practice	Rat Pups Exposed to Vancomycin: Histopathologic Evaluation of Kidneys
Kliethermes, M.	CCP	Pharmacy Practice	CAUS-T2DM, Chinese Americans Understanding and Self-managing Type 2 Diabetes Mellitus
Liu, J.	CCP	Pharmacy Practice	Development of Assays for Polymyxin B and Defining Pharmacokinetic Profile of AuNP-PB and its Components
Patel, J.	CCP	Pharmacy Practice	Evaluation of Smartphone Based Medication Adherence Applications in Non Valvular Atrial Fibrillation Patients Treated with Oral Factor Xa Inhibitors
Rhodes, N. J.	CCP	Pharmacy Practice	Evaluation of Azithromycin-based Combination Therapies to Treat Highly Virulent <i>P. aeruginosa</i> Infections
Van Dril, E.	CCP	Pharmacy Practice	Workload Evaluation of Clinical Pharmacists in Ambulatory Care Settings

TOTAL CCP INTRAMURAL FUNDING: \$42,155

CDMI

Investigator/s	College	Department	Proposal Title
Ahmed, A. (Parikh, A. CDMI '19 & Fushi, A. CDMI '20)	CDMI	Dental	Chemical and Physical Characteristics of Whitening Toothpastes and Rinses
Ali, A. (Elapunkal, R. CDMI '18 & Zieba, T. CDMI '18)	CDMI	Dental	Perceptions of the Relationship Between Oral and Systemic Health: A Study of Midwestern University Multispecialty Clinic Patients, Students and Health Professionals
Bjork, B. C. (Yousef, P. CDMI '20)	CDMI Joint Appointment	Dental	Using CRISPR-Cas9-mediated Genome Modification to Generate a Conditional Gene Trap Null Allele of Tgds
Browar, A. (Culver, A. CDMI '20)	CDMI	Dental	Retinopathy in Subjects With Severe Periodontitis
Chandar, N. (Sircher, T. CDMI '18)	CDMI Joint Appointment	Dental	Characterization of the Differentiation Potential of Stem Cells from Human Exfoliated Deciduous Teeth to Odontoblasts and Osteoblasts
Edwards, J. (Wei, Y. CDMI '19 & Leavitt, L. CDMI '20)	CDMI Joint Appointment	Dental	Periodontal Disease and the Environmental Toxicant Cadmium: Mechanism of Cadmium-induced Erosion of Alveolar Bone
Maghraby, A. (Karimi, P. CDMI '19)	CDMI	Dental	General Dentists, Prosthodontists, Pediatric Dentists, and Dental Hygienists' Level of Knowledge on Erosive Tooth Wear
Mathew, R. (Yeh, C. CDMI '18)	CDMI	Dental	Evaluation of Dental Student Education for Special Care Patients
Mayer, A. (Han, J. CDMI '20)	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> Cell Adherence

TOTAL CDMI INTRAMURAL FUNDING: \$50,672

INTRAMURAL FUNDING

CHS-DG

Investigator/s	College	Department	Proposal Title
Anderson, D.	CHS-DG	Physical Therapy	Excellence in Pediatric Physical Therapy Education Teaching for the Future
Burton Hess, J.	CHS-DG	Physical Therapy	Short-term Effects of Feedback via Surface Topography on Spinal, Pelvic, and Lower Extremity Amputations
Ciancio, M.	CHS-DG	Biomedical Sciences	Influence of Diet on microRNA Profile of Squamous Cell Carcinoma Tumors
Dillon, T.	CHS-DG	Physical Therapy	The Effect of Sacroiliac Joint Instability on Dynamic Balance
Evans, C.	CHS-DG	Physical Therapy	Does Intestinal Over-Expression of Heat Shock Protein 70 Reverse High Fat Diet-Induced Changes in Adipose Tissue Macrophage Activation?
Krisjansdottir, K.	CHS-DG	Biomedical Sciences	The Effect of NPM1 on Migration and Invasion of Neuroblastoma Cells
Post, K.	CHS-DG	Speech-Language Pathology	Parent Training in Partner Augmented Input
Prodoehl, J.	CHS-DG	Physical Therapy	Spatiotemporal Parameters of Cortical Sensorimotor Processing During Orofacial Palpation, Jaw Movement and Biting in Individuals with Chronic Orofacial Pain

TOTAL CHS-DG INTRAMURAL FUNDING: \$30,550

CHS-GD

Investigator/s	College	Department	Proposal Title
Eckman, D.	CHS-GD	Biomedical Sciences	Cardiovascular and Cerebrovascular Function in APOE3 and APOE4 Targeted-Replacement Mice
Hull, E.	CHS-GD	Biomedical Sciences	Control Switching Between Two Oncogenic Subtypes Through Epigenetic Mechanisms
Hull, E.	CHS-GD	Biomedical Sciences	The Role of Inhibitory Complement Proteins in Shifting T-cell Mediated Responses to Promote Progression of Cutaneous Squamous Cell Carcinoma
Jansen, K.	CHS-GD	Behavioral Sciences	Personal and Environmental Factors in Burnout Across Health Professions
Jones, C.	CHS-GD	Behavioral Sciences	Effects of Losartan and Exercise on Aortic Inflammation in Marfan Syndrome Mice
Soby, S.	CHS-GD	Biomedical Sciences	Comparative Metagenomes in Unilateral Canine Otitis Externa Infections
Soby, S.	CHS-GD	Biomedical Sciences	Transcriptomic Changes in the Ascomycete Fungi <i>Phomopsis</i> sp., and <i>Coleophoma</i> sp. in Response to Volatile Organic Compounds Produced by <i>Chromobacterium vaccinii</i>
Wolford, L.	CHS-GD	Speech-Language Pathology	Flexible Endoscopic Evaluation of Swallowing Competency Through Simulation-based Learning

TOTAL CHS-GD INTRAMURAL FUNDING: \$44,925

INTRAMURAL FUNDING

CPG

Investigator/s	College	Department	Proposal Title
Afolabi, T.	CPG	Pharmacy Practice	Evaluation of Home Parenteral Nutrition in Pediatric Patients Enrolled in Medicare and Commercial Insurance
Elbayoumi, T.	CPG	Pharmaceutical Sciences	3D-printed Biodegradable Polymeric Scaffolds Coated with Layered Nanoemulsions to Simulate Osteogenic Differentiation of Bone Marrow and Adipose Tissue-derived Mesenchymal Stem Cells for Cranio-Maxillofacial Tissue Regeneration
El-Ibiary, S.	CPG	Pharmacy Practice	National Survey of Burnout and Associated Risk Factors Among Pharmacists in the U.S.
Olsen, M.	CPG	Pharmaceutical Sciences	Synthesis and Evaluation of Novel ASPH Inhibitors for the Treatment of Cancer
Peckham, A.	CPG	Pharmacy Practice	Gabapentin Abuse: Prevalence, Medical Harm and Economic Impact
Yao, M.	CPG	Pharmaceutical Sciences	Elevated Thrombospondin 1 Secondary to Hyperglycemia Causes Damage to the Endothelium and Poor Wound Healing via Anti-angiogenic Effects in Diabetes Mellitus

TOTAL CPG INTRAMURAL FUNDING: \$45,481

CVM

Investigator/s	College	Department	Proposal Title
Chako, C	CVM	Veterinary Medicine	The Interaction Between <i>Cryptosporidium parvum</i> , Gastrointestinal Microbiota and Adaptive Immunity in Dairy Calves
Thangamani, S.	CVM	Veterinary Medicine	Effect of Fungi on Anticancer Drug Efficacy
Waitt Wolker, L., Norris J.G. & Veltri C.	CVM	Veterinary Medicine	Establishing Pharmacokinetics of Fluoxetine in Horses
Wycislo, K.	CVM	Veterinary Medicine	Investigating CpG ODN-mediated Attenuation of Lung Metastasis in a Pre-clinical Model of Murine Osteosarcoma

TOTAL CPG INTRAMURAL FUNDING: \$52,480

INTRAMURAL FUNDING

MULTIDISCIPLINARY RESEARCH AWARDS

Investigator/s	Campus	Award	Proposal Title
Miller, S. (CCOM), Padala, S. (CDMI) & Bjork, B. (CCOM)	Downers Grove	Multidisciplinary	Obesity and Malocclusion: A Genotype-Phenotype Study Examining the Potential Relationship Between Obesity Genetics and Masticatory Form
Mitchell, J. (CDMA), Pulido, M.T. (CDMA), Eckman, D (CHS-GD) & Wellensiek, B. (CHS-GD)	Glendale	Multidisciplinary	Can Laser Therapy in the Dental Office Heal Cold Sores Better Than Anything Else?
*Olsen, M. (CPG) & Kim, C. (AZCOM)	Glendale	Multidisciplinary	Evaluation of Novel Anti-Aspartyl (asparaginyl)- β -Hydoxylase Monoclonal Antibodies

TOTAL MULTIDISCIPLINARY INTRAMURAL FUNDING: \$60,000

ONE HEALTH RESEARCH AWARDS

Investigator/s	Campus	Award	Proposal Title
VandenBrooks, J. (AZCOM), Hernandez, J. (AZCOM), Quinlan, M. (AZCOM), Goetz, N. (CVM), Kreisler, R. (CVM) & Lee, J.K. (CVM)	Glendale	One Health	Elucidating the Role of <i>Rhipicephalus sanguineus</i> (the Brown Dog Tick) as a Vector for Rocky Mountain Spotted Fever (RMSF) Transmission in Arizona
Rodriguez Soza, J. (AZCOM), Tullot, T. (AZCOM) & Janthakahalli Nagaraj, V. (AZCOM)	Glendale	One Health	Study of the Effects of Plasticizers on the Male Reproductive System in the Testis Xenografting Model

TOTAL ONE HEALTH INTRAMURAL FUNDING: \$20,000

**TOTAL MWU INTRAMURAL FUNDING AWARDED BY ALL COLLEGES
DURING THIS REPORTING PERIOD: \$537,634**

*The asterisk denotes new material. All material in this report is cumulative from July 1, 2017 through June 30, 2018.

FY18, 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	25.8	\$1,711,279
GLENDALE, ARIZONA	35.5	\$2,115,149
TOTAL	61.3	\$3,826,428

***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 \$3,826,428

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 2018, MWU has spent \$1,614,097 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 \$229,585 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. For Fiscal Year 2018, MWU paid out \$49,652 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.

FY18, 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	233	\$12,131
TRAVEL TO PRESENT RESEARCH	26	\$13,000
FELLOWSHIPS*	46	\$202,000
TOTAL FUNDING IN SUPPORT OF STUDENT RESEARCH ACTIVITIES IN ILLINOIS		\$227,131

RESEARCH SUPPORT FOR STUDENTS IN GLENDALE, ARIZONA		
ACTIVITY	NUMBER OF AWARDS	TOTAL FUNDING
RESEARCH POSTER PRINTING	133	\$8,588
TRAVEL TO PRESENT RESEARCH	38	\$16,875
FELLOWSHIPS*	61	\$256,050
TOTAL FUNDING IN SUPPORT OF STUDENT RESEARCH ACTIVITIES IN ARIZONA		\$281,513

*Includes fellowships awarded in FY18, even though some payments are made in FY19.

ONE HEALTH STUDENT RESEARCH AWARDS

Investigator/s	Campus	Award	Proposal Title
Jung, A. (CDMI '21) & Swartzendruber, J. (CCOM)	Downers Grove	One Health	Prevention of Sensitization to House Dust Mites with the Probiotic <i>Bacillus subtilis</i>
Lu, R. (CCOM '20), Dineley, K. (CCOM), Nichols, K. (CCOM) & Malaiyandi, L. (CCOM)	Downers Grove	One Health	Investigating the Effects of Flame Retardant on Organelle Morphology in Adrenal Cortex Cells
Rappaport, A. (CVM '19), Chen, M. (CVM '19) & Woods, C. (IHI)	Glendale	One Health	Determine if Weather Pattern Changes Are Associated with Changes in Reported Snake Envenomations
Allen, J. (CVM '19), VandenBrooks, J. (AZCOM), Hernandez, J. (AZCOM), Quinlan, M. (AZCOM), Lee, J.L. (CVM), Kreisler, R. (CVM) & Goetz, N. (CVM)	Glendale	One Health	Elucidating the Role of <i>Rhipicephalus sanguineus</i> (the Brown Dog Tick) as a Vector for Rocky Mountain Spotted Fever Transmission in Arizona

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

**TOTAL FUNDING IN SUPPORT OF STUDENT RESEARCH ACTIVITIES
ACROSS BOTH CAMPUSES IS \$518,644**

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