

ANNUAL RESEARCH REPORT

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

OFFICE OF RESEARCH AND SPONSORED PROGRAMS

July 1, 2023 - June 30, 2024

Historical Research Support and Activity Data

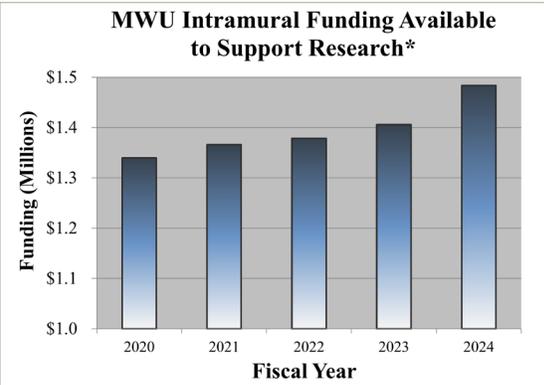
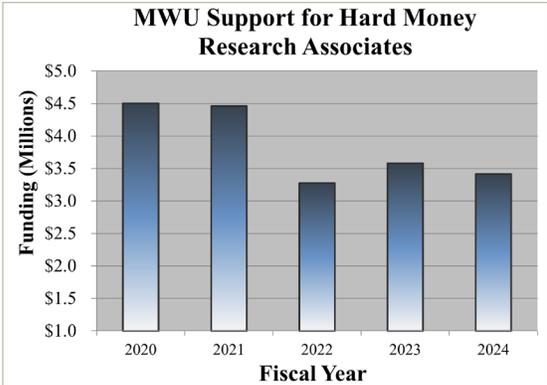
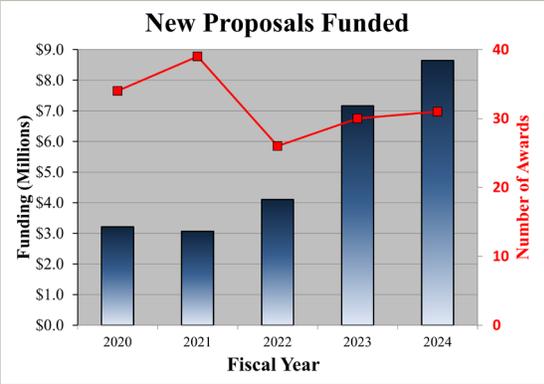
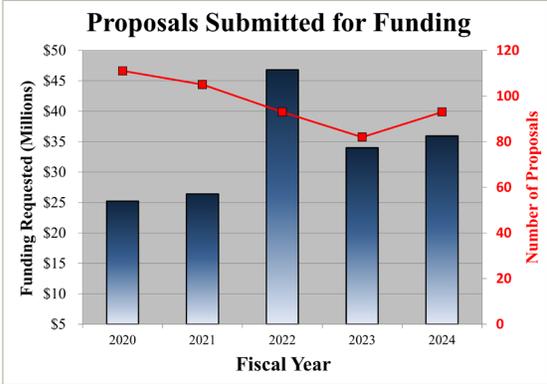
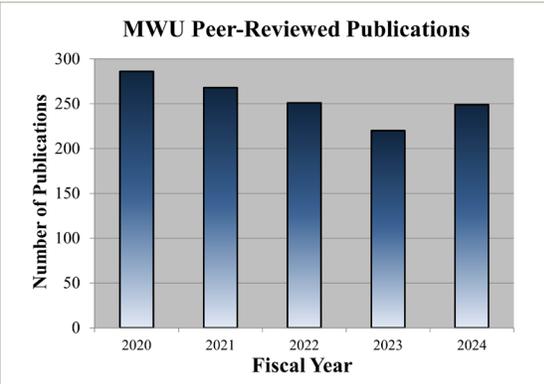
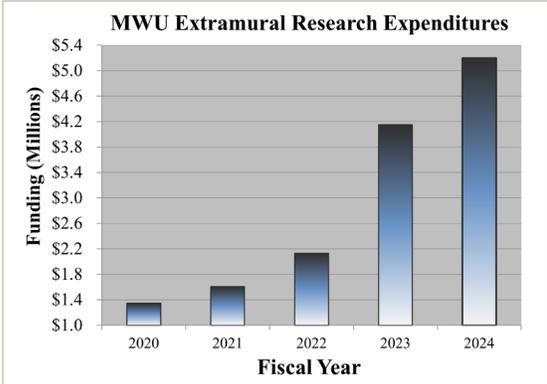
The Midwestern University (MWU) Annual Research Report demonstrates research achievements of which members of the MWU community should be proud. The graphs below show historical data over the last five years, highlighting the university's research activity and support. THANK YOU to all of MWU's faculty members, research staff and students whose efforts have consistently strengthened MWU's research programs.



James M. Woods, PhD
Assistant Vice President of
Research

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*Includes intramural funding (grants, fellowships, travel, etc) provided to all MWU colleges and available from the ORSP

Fast Research Facts 2023-2024

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 received \$188,860 in such incentives for FY 2024
- MWU provides “hard money” research technicians for faculty, including 59.0 Full Time Equivalents funded at \$3,412,143 for FY 2024
- New faculty are provided start-up packages
- Faculty can request capital research equipment through the university:
 - § MWU purchased \$995,085 in capital research equipment during FY 2024
 - § The Glendale campus received a new confocal microscope in FY 2023
- Intramural funding is available for faculty who actively seek extramural funding and for students applying for fellowships and travel, including \$1,483,166 awarded in FY 2024

Support for Student Research

- MWU makes a significant commitment to student research, demonstrated through the awarding of 93 fellowships at a total cost of \$525,500 for research stipends in FY 2024
- MWU’s Research Days, held on each campus, had a total of 384 abstracts in 2024 where almost all of these were by students engaged in research
- MWU pays for high-quality poster printing for its students and faculty, including a budget of \$10,387 for printing research posters through the ORSP in FY 2024
- MWU supports students to travel and present their research data, including up to \$500 of support for first author students who have an abstract accepted at a national meeting

Funding Success

- MWU’s extramural research expenditures during FY 2024 totaled \$5,197,260
- MWU faculty have received more than 50 NIH grants, the majority of which have been R15 awards, but also include multiple R01, R21 and R03 awards
- MWU faculty have successfully obtained FDA, HRSA, NSF, and USDA Grants
- Foundation Grants: American Heart Association, American Optometric Foundation, HonorHealth, Leakey Foundation, Marfan Foundation, PhRMA Foundation, PetSmart Charities, Arizona Alzheimer’s Consortium, National Assoc. of Chain Drug Stores, Pharmaceutical Research & Manufacturers of America Foundation, Arizona Biomedical Research Commission, etc.
- For-profit grants: Allegra Therapeutics, Boehringer Ingelheim, Eyenovia, Johnson & Johnson, Merck, Nevakar, Hiossen, Sangart, etc.

Office of Research & Sponsored Programs (ORSP)

- MWU's ORSP handles both pre-award and post-award grant and contract submissions, including 93 proposals submitted in FY 2024 requesting \$35,927,617
- MWU's ORSP offers intramural funds to all colleges and the following full time positions to support faculty research:
 - § A Grants Administrator, a Grants Specialist, and a Grants Manager to assist faculty with grant and budget preparation and grant submission
 - § Research Administrators on each campus to assist MWU's IACUC, IRB, Radiation Safety and Biosafety Committees
 - § A Manager of Bio/Clinical Statistics and a Data Analyst to assist with data management and statistical needs
 - § IP and Contracts Administrators on each campuses to assist with legal agreements
 - § ORSP Associate Directors and Research Compliance Specialists on both campuses 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 \$308,960 of waived charges in FY 2024
- In FY 2024, MWU's ORSP offered \$3,500 to support a Research Seminar Series where faculty can bring in experts in their field

Research Facilities

- In 2020 a new vivarium for animal research was opened on the Glendale campus which added 18,500 additional square feet of research space for studying rodents, zebrafish, and finches at a cost of \$9,250,000
- In 2020, new "dry lab" research space was opened in Dr. Arthur G. Dobbelaere Science Hall at a cost of more than \$1,159,000
- In 2020 MWU opened a Core Facility on the Glendale campus with the following highlights:
 - § Dedicated labs for histology (550 ft²), microscopy (390 ft²), and cell culture (150 ft²)
 - § Over 25 pieces of high-end, specialized capital research equipment
 - § A full-time Research Specialist to maintain equipment and train and supervise faculty, staff, and student users
 - § Floating software licenses for 3D visualization and analysis of computed tomographic and confocal imagery
 - § Shared equipment that is accessible to faculty, staff, and students free of charge (i.e., no hourly usage rates)

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

COLLEGE OF DENTAL MEDICINE-ARIZONA (CDMA): SUBMITTED EXTRAMURAL PROPOSALS

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Pierre-Bez, A. & Kuehn, N.	CDMA	Dental Medicine	Fluid Conductance through Tooth Structure: CO2 Laser Preparation Versus Conventional Bur Preparation	1/26/2024	\$2,700	American Association for Dental, Oral, and Craniofacial Research	4/1/2024
Pulido-Hernandez, T. & Beard, C.	CDMA	Dental Medicine	Shear Bond Strength: The Comparison of Universal Adhesives	1/26/2024	\$2,700	American Association for Dental, Oral, and Craniofacial Research	4/1/2024

Total of CDMA Submitted Extramural Proposals: \$5,400

COLLEGE OF DENTAL MEDICINE-ILLINOIS (CDMI): SUBMITTED EXTRAMURAL PROPOSALS

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Sangalli, L.	CDMI	Dental Medicine	Assessment and Self-Management of Acute TMD Pain with Telehealth Modalities in a Dental School Setting	7/10/2023	\$20,000	International Association for the Study of Pain Career Research Grant	10/1/2023
Sangalli, L.	CDMI	Dental Medicine	The Impact of Sleep and Psychological Functioning on Pain During an Orthodontic Treatment	8/14/2023	\$15,000	International Association for the Study of Pain Collaborative Research Grant	10/1/2023
Sangalli, L.	CDMI	Dental Medicine	Feasibility of a New Methodology for Dental Education in Temporomandibular Disorders through Virtual Patient-Based Learning	10/16/2023	\$140,600	NIH R03	7/1/2024
Sangalli, L.	CDMI	Dental Medicine	Exploring Oral Health Education Program in Temporomandibular Disorders Among Dental Schools	1/25/2024	\$15,000	American Dental Education Association Gies Foundation	9/1/2024

Total of CDMI Submitted Extramural Proposals: \$190,600

COLLEGE OF GRADUATE STUDIES (CGS): SUBMITTED EXTRAMURAL PROPOSALS

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Al-Nakkash, L.	CGS	Physiology	Assessment of Metabolomic Pathways Involved in the Brain-intestinal Axis in Western Diet Induced Alzheimer's Pathology	4/19/2024	\$23,240 (includes a \$8,938 match from MWU)	Arizona Alzheimer's Consortium	7/1/2024
Al-Nakkash, L., & Broderick, T.	CGS	Physiology	Use of Intermittent Fasting as an Effective Mitigator of Alzheimer's Disease Pathology	11/6/2023	\$120,000	Arizona Alzheimer's Consortium	7/1/2024
Bodenstine, T.	CGS	Biochemistry & Molecular Genetics	Identifying Metabolic Reprogramming Responses in Oral Squamous Cell Carcinoma	6/16/2024	\$281,200	NIH R03	4/1/2025
Buhlman, L.	CGS	Biomedical Sciences	Evaluating Efficacy and Mechanisms of a Novel Mn Porphyrin Ring Redox Compound in a Drosophila melanogaster Model of Parkinson's Disease	10/24/2023	\$449,421	NIH R15 with a subaward to Barrow Neurological Institute (\$138,459)	7/1/2024
Buhlman, L.	CGS	Biomedical Sciences	Re: Evaluating Efficacy and Mechanisms of a Novel Mn Porphyrin Ring Redox Compound in a Drosophila melanogaster Model of Parkinson's Disease	6/24/2024	\$452,797	NIH R15 with a subaward to Barrow Neurological Institute (\$154,080)	4/1/2025
Carroll, D.	CGS	Biochemistry & Molecular Genetics	Identification of Signaling Molecules that Function at Fertilization	10/25/2023	\$399,064	NIH R15	7/1/2024
Ebeid, M. & Traka, M.	CGS	Anatomy	The Effect of Aging on Recovery from Hearing Loss and Sciatic Neuropathy in the DTA Mouse Model upon Induction of Schwann Cell Loss	9/1/2023	\$351,286	Department of Defense	10/1/2023

CGS: SUBMITTED EXTRAMURAL PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Ellermeier, J.	CGS	Microbiology & Immunology	The Role of Psp and Tat in the Salmonella Response to Periplasmic Stress	10/23/2023	\$421,800	NIH R15	7/1/2024
Ellermeier, J.	CGS	Microbiology & Immunology	Impacts of fur1 and fur2 Deletions on Gene Regulation and Biofilm Formation in the Emerging Nosocomial Pathogen Ralstonia insidiosa	2/16/2024	\$140,600	NIH R03	9/1/2024
Esfandiarei, M.	CGS	Biomedical Sciences	Identifying the Role of Maternal Dietary Deficiencies in One-carbon Metabolism on Offspring Ischemic Stroke Outcome	6/14/2024	\$38,972	NIH R15 subaward from Southern Illinois University	4/1/2025
He, Y.	CGS	Precision Medicine	Epigenetic Regulation of Opioid Addiction by microRNA	6/25/2024	\$421,800	NIH R15	4/1/2025
Hughes, T.	CGS	Master of Public Health	Mild Cognitive Impairment: A Prospective Community Study	11/1/2023	\$65,078	NIH R01 subaward from University of Pittsburgh	8/28/2023
Hull, E.	CGS	Biomedical Sciences	Elucidating a Mechanistic Link Between Progranulin and Lysosomal Function in the Pro-inflammatory Response to Guide Development of Therapeutics Effective in Early Intervention in Alzheimer's Disease	2/26/2024	\$421,800	NIH R15	9/1/2024
Hull, E.	CGS	Biomedical Sciences	mRNA-mediated Alterations of PGRN Production During the Inflammatory Response in Alzheimer Disease	3/4/2024	\$30,000	Arizona Alzheimer's Consortium	7/1/2024
Hull, E.	CGS	Biomedical Sciences	The Role of Progranulin in the Inflammatory Response in Alzheimer's Disease	4/19/2024	\$24,930 (includes a \$9,589 match from MWU)	Arizona Alzheimer's Consortium	7/1/2024
Hull, E.	CGS	Biomedical Sciences	Elucidating the Mechanistic Links between Lysosome Function and Biological Activity of Progranulin to Reduce the Pro-inflammatory Response to Brain Injury and Neurodegeneration	4/19/2024	\$1,000,000	Department of Defense	6/1/2025
Jauregui, E.	CGS	Physiology	Dissecting the Role of Lrh1 in Phthalate-Related Reproductive Impairments: A Cellular and Molecular Approach	2/26/2024	\$419,385	NIH R15	9/1/2024
Jauregui, E.	CGS	Physiology	Elucidating Sex-specific Metabolism of Phthalates in the Reproductive Systems	4/26/2024	\$10,000	Society for the Study of Reproduction	9/1/2024
Jentarra, G. & Jones, T.B.	CGS	Precision Medicine & Anatomy	Exploring the Association between the Bacterial Content of Blood and Brain Tissue, and its Influence on AD Pathology	4/19/2024	\$65,000 (includes \$30,000 salary and \$13,461 matches from MWU)	Arizona Alzheimer's Consortium	7/1/2024
Jung, H.	CGS	Anatomy	Developmental and Functional Integration in the Axial Skeleton of Anthropoids	8/29/2023	\$9,760	The Leakey Foundation	9/1/2023
Kronstad, L.	CGS	Microbiology & Immunology	Improving the Immunogenicity of Influenza mRNA-based Vaccines by Harnessing Natural Killer and Dendritic Cell Cross-talk	6/25/2024	\$482,663	NIH R15	4/1/2025
Kronstad, L. & Wellensiek, B.	CGS	Microbiology & Immunology, Biomedical Sciences	Improving Influenza Vaccines using Translation Enhancing Elements	12/15/2023	\$194,000	American Lung Association	7/1/2024
Lynch, L.	CGS	Anatomy	From Access to Engagement: Integrating Open Science into Arizona K-6 Education	6/20/2024	\$35,077	NSF subaward from American Museum of Natural History	11/1/2024
Lynch, L.	CGS	Anatomy	BRC-BIO: The Impact of Environmental Teratogens on the Evolution of CNS Development Genes	6/27/2024	\$76,606	NSF subaward from Valdosta State University	7/1/2025
Lynch, L. & Heesy, C.	CGS	Anatomy	NSFDEB-NERC Determining the Interactions between Phenotype, Behavior, and Environment as They Shape Carnivoran Endocast Morphology	10/15/2023	\$1,804,613	NSF with subaward to Oklahoma State U (\$74,737)	4/1/2024

CGS: SUBMITTED EXTRAMURAL PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Martinez-Guryn, K.	CGS	Biomedical Sciences	The Role of Western Diet-induced Small Intestinal Gut Microbiota in Initiation and Progression of Non-alcoholic Fatty Liver Disease	7/5/2023	\$3,664,171	NIH R01 MPI with University of Wisconsin (subaward to UW \$1,880,653)	4/1/2024
Martinez-Guryn, K.	CGS	Biomedical Sciences	Intestinal HSP70 Protects Against Diet-induced Obesity Through Modulating Fat Metabolism	3/5/2024	\$2,836,988	NIH R01 with subawards to Purdue U (\$713,887) and UNC-Char (\$360,815)	9/1/2024
Martinez-Guryn, K.	CGS	Biomedical Sciences	The Impact of Peanut Reintroduction on Dietary Outcomes and Gut Health	4/18/2024	\$60,000	The Peanut Institute	8/1/2024
Mazewski, C.	CGS	Biochemistry & Molecular Genetics	Glioblastoma Signaling and Associated Microbiome Effects of Phenolic-rich Plant Extracts	6/25/2024	\$409,192	NIH R15	4/1/2025
Olson, C.	CGS	Physiology	Collaborative Research: High-Frequency Vocal Behavior in a Tropical Hummingbird	12/18/2023	\$812,954	NSF	9/1/2024
Puthanveetil, P.	CGS	Pharmacology	Apigenin Mediated Cardiac Protection in Mouse Model of Hypercholesterolemia	9/14/2023	\$154,000	American Heart Association - AIREA	1/1/2024
Puthanveetil, P.	CGS	Pharmacology	Apigenin Mediated Cardiac Protection in Mouse Model of Hypercholesterolemia	10/25/2023	\$421,800	NIH R15	1/1/2024
Puthanveetil, P.	CGS	Pharmacology	Chrysin Mediated Protection in Obesity Involved Meta-Inflammation	11/16/2023	\$150,408	NIH R03 with subaward to Ohio State U (\$16,000)	7/1/2024
Revill, A.	CGS	Physiology	Effects of Chronic Intermittent Hypoxia on Cholinergic Modulation at Hypoglossal Motoneurons	10/25/2023	\$421,800	NIH R15	7/1/2024
Revill, A.	CGS	Physiology	Physiological and Anatomical Hallmarks Associated with Intermittent Hypoxia and Aging – Insights into Respiratory Dysfunctions Associated with Alzheimer’s Disease	11/6/2023	\$120,000	Arizona Alzheimer’s Consortium	7/1/2024
Riede, T.	CGS	Physiology	Integrating Genetic and Functional Testing Tools to Examine the Postnatal Larynx Development in vivo	2/2/2024	\$168,720	NIH R21 subaward from Cincinnati Children’s Hospital Med Center	9/1/2024
Riede, T.	CGS	Physiology	Generation of an Inducible Mouse Model to Investigate Disease Mechanisms in Postnatal Respiratory Tract, Craniofacial and Musculo-skeletal Tissue	4/19/2024	\$168,720	NIH R21 subaward from Cincinnati Children’s Hospital Med Center	1/1/2025
Roberts, C.	CGS	Pharmacology	Beta Carboline Alkaloids as Inhibitors of Epithelial-mesenchymal Transition and Cell Proliferation in Ovarian Cancer	12/1/2023	\$75,000	Rivkin Center	4/1/2024
Roberts, C.	CGS	Pharmacology	Beta Carboline Alkaloids as Inhibitors of Epithelial-mesenchymal Transition and Cell Proliferation in Ovarian Cancer	12/15/2023	\$100,493	Elsa U. Pardee Foundation	6/1/2024
Roberts, C.	CGS	Pharmacology	Alkaloids from Kratom and Marine Sponges as Inhibitors of Epithelial to Mesenchymal Transition and Cell Proliferation in Epithelial Ovarian Cancer	6/25/2024	\$419,770	NIH R15	4/1/2025
Samanta, D.	CGS	Microbiology & Immunology	Defining the Molecular Mechanisms of Coxiella burnetii-mediated Subversion of Host Endosomal Maturation and Recycling Pathways	10/24/2023	\$419,770	NIH R15	7/1/2024
Samanta, D.	CGS	Microbiology & Immunology	Identifying the Role of Host Recycling Endosomes in Coxiella burnetii Pathogenesis	6/25/2024	\$412,462	NIH R15	4/1/2025
Shim, M., Al-Nakkash, L., & Broderick, T.	CGS	Biochemistry & Molecular Genetics, Physiology	Metabolic Intervention of Alzheimer’s Disease: Ketone Bodies as a Potential Strategy to Improve Energy Metabolism in the Aging Brain	4/19/2024	\$26,830 (includes \$10,319 match from MWU)	Arizona Alzheimer’s Consortium	7/1/2024

CGS: SUBMITTED EXTRAMURAL PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Stephenson, E.	CGS	Anatomy	Mechanisms Driving Metabolic Adaptations to Physical Inactivity	2/26/2024	\$421,800	NIH R15	12/1/2024
Stephenson, E.	CGS	Anatomy	Mechanism of Metabolic Regulations During Physical Inactivity	6/5/2024	\$1,757,500	NIH R01	4/1/2025
Smith, H.	CGS	Anatomy	Unlocking the Senescence-resistant Adaptations of Long-lived Giant Tortoises to Develop a Novel Model Organism for Aging Studies	8/31/2023	\$33,000	Impetus Grants	12/1/2023
Smith, H.	CGS	Anatomy	Improving the Diagnosis and Treatment of Orthopedic and Shell Diseases in Captive Tortoises Using Dissection, CT Scans, and Radiography	10/1/2023	\$30,000	Veterinary Orthopedic Society	5/1/2024
Sundaresan, S.	CGS	Physiology	Intrinsic Primary Afferent Neurons in Regulation of Intestinal Nutrient Sensing and Obesity	6/5/2024	\$3,217,209	NIH R01 with subawards to Michigan St (\$252,009) and Vanderbilt (\$804,999)	4/1/2025
Terranova, J.	CGS	Anatomy	The Role of Oxytocin in the Neural Circuit Mechanisms that Regulate Empathic Response in Mice: Implications for Boderline Personality Disorder	3/12/2024	\$70,000	Brain and Behavior Research Foundation	1/15/2025
Traka, M.	CGS	Anatomy	Effects of Aging on Schwann Cell Regeneration	2/26/2024	\$421,800	NIH R15	12/1/2024
Valenzuela, I.	CGS	Physiology	Neuromuscular Synapse Formation and Maturation in Maternal Diet-Induced Obesity	2/26/2024	\$405,448	NIH R15	12/1/2024
Ventrella, R.	CGS	Precision Medicine	Establishing Xenopus laevis as an in vivo Model System for Investigating the Effect of Photobiomodulation Therapy in Oral Mucositis	6/10/2024	\$273,080	NIH R03	4/1/2025

Total of CGS Submitted Extramural Proposals: \$25,212,007

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

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Dart, L.	CHS-DG	Speech Language Pathology	Investigating Social Determinants of Health and Chronic Outcomes in Children with Traumatic Brain Injuries and their Families	4/17/2024	\$10,000	American Speech-Language-Hearing Foundation	12/1/2024
Carroll-Alfano, M.	CHS-DG	Speech Language Pathology	Midwestern Speak Out Therapy Project	3/8/2024	\$13,300	Parkinson Voice Project	5/1/2024

Total of CHS-DG Submitted Extramural Proposals: \$23,300

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

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Bouton, M.	CHS-GD	Physician Assistants	AAPA-PAEA Research Fellowship	8/4/2023	\$22,248	PA Education Association	11/1/2023
Eikenberry, M.	CHS-GD	Physical Therapy	Characterization of Bilateral Ankle Mechanics Post-Stroke and its Relationship to Impaired Balance Control and Mobility	10/10/2023	\$28,699	NIH R21 subaward from Arizona State University	7/1/2024
Eikenberry, M.	CHS-GD	Physical Therapy	Characterization of Bilateral Ankle Mechanics Post-Stroke and its Relationship to Impaired Balance Control and Gait	6/6/2024	\$15,000	NIH R03 subaward from Arizona State University	4/1/2025
Rivera, M. & Lyding, M.	CHS-GD	Speech Language Pathology, Occupational Therapy	The Multidisciplinary Intervention for Language and Learning in the Early Years (MILLEY) Play Group	8/2/2023	\$25,000	Josiah Macy Jr. Foundation	10/1/2023
Turner, T.	CHS-GD	Occupational Therapy	Effects of Dementia on Couplehood: An Occupational Perspective	4/19/2024	\$20,000 (includes a \$7,693 match from MWU)	Arizona Alzheimer's Consortium	7/1/2024

Total of CHS-GD Submitted Extramural Proposals: \$110,947

COLLEGE OF PHARMACY (COP): SUBMITTED EXTRAMURAL PROPOSALS

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Briyal, S.	CPDG	Pharmaceutical Sciences	Defining the Role of Endothelin B Receptors Agonism on Neuronal Regeneration and Functional Outcome Following Hypoxic-ischemic Encephalopathy in Neonatal Rats	10/25/2023	\$421,800	NIH R15	7/1/2024
Briyal, S.	CPDG	Pharmaceutical Sciences	Study of the Effects of Endothelin B Receptors (ETBR) Agonism on Neural Stem / Progenitor Cells and Mitochondria in Alzheimer's Disease	6/25/2024	\$527,250	NIH R15	4/1/2025
Huang, V.	CPG	Pharmacy Practice	Two Against One: Ceftazidime-Avibactam Plus Aztreonam vs Cefiderocol in the Treatment of Metallo-Beta-Lactamase-Producing Bacterial Infections	5/15/2024	\$45,399	Shionogi US	7/1/2024
Huang, V. & Volker, S.	CPG	Pharmacy Practice	Evaluation of Prevalence of Minocycline Heteroresistance in Clinical Acinetobacter baumannii Isolates	9/1/2023	\$27,930	American College of Clinical Pharmacy Research Institute	9/1/2023
Olsen, M.	CPG	Pharmaceutical Sciences	Develop FTO Small Molecule Inhibitor for the Treatment of C9ORF72-linked Frontotemporal Dementia	8/21/2023	\$1,616,900	NIH R61 subaward from Johns Hopkins University	7/1/2024
Pais, G.	CPDG	Pharmaceutical Sciences	Defining the Exposure-response Relationship of Cefepime and its Metabolites in a Rat Model of Cefepime-induced Neurotoxicity	11/16/2023	\$411,457	NIH R21 with subaward to University of Florida (\$52,897)	7/1/2024
Pais, G.	CPDG	Pharmaceutical Sciences	Cefepime Physiologically-based Pharmacokinetic Models for Cross-Species Extrapolation	10/9/2023	\$231,480	NIH K12 Pediatric Clinical Pharmacology Research Career Training Grant subaward from Cincinnati Children's Hospital	12/1/2023
Pais, G.	CPDG	Pharmaceutical Sciences	Defining the Exposure Threshold for Cefepime and the Role of its Metabolites in Cefepime-induced Neurotoxicity	6/16/2024	\$409,929	NIH R21 with subaward to University of Florida (\$52,000)	4/1/2025
Scheetz, M.	CPDG	Pharmacy Practice	Defining Optimal Tacrolimus Dosing and Concentrations in the Early Post-lung Transplant Period Based on Short-and Long-term Clinical Impacts	7/5/2023	\$112,480	NIH R01 subaward from University of Pennsylvania	4/1/2024

COP: SUBMITTED EXTRAMURAL PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Scheetz, M.	CPDG	Pharmacy Practice	Markers of Nephrotoxicity During Treatment with Antibiotic Combinations: The MONACO Clinical Trial	10/5/2023	\$150,238	NIH R01 subaward from University of Pennsylvania	7/1/2024
Scheetz, M.	CPDG	Pharmacy Practice	Definitely Addressing the Vancomycin, Piperacillin-tazobactam, and AKI Controversy; The Validate Trial	1/9/2024	\$1,206,998	PCORI subcontract from the Univ of Michigan	11/1/2024
Scheetz, M.	CPDG	Pharmacy Practice	Data-Driven Decision Nodes (DDN) as a Means to Optimize Antibiotic Efficacy and Safety for Multi-drug Resistant Pathogens	2/5/2024	\$3,653,956	NIH R01 with subaward to University of Florida (\$1,837,227)	6/1/2023
Scheetz, M.	CPDG	Pharmacy Practice	Strategies and New Therapeutics to Avoid Drug Induced Kidney Injury in the Treatment of Multi-Drug Resistant Pathogens	6/16/2024	\$386,650	NIH R21	4/1/2025
Yao, M. & Elbayoumi, T.	CPG	Pharmaceutical Sciences	Pre-clinical Assessment of Therapeutic CD47-nanomedicine to Neutralize Pathological Thrombospondin 1 Levels Underlying Acute and Chronic Vascular Damages Following Renal Ischemia-Reperfusion Injury	10/24/2023	\$420,854	NIH R15	7/1/2024

Total of COP Submitted Extramural Proposals: \$9,623,321

COLLEGE OF VETERINARY MEDICINE (CVM): SUBMITTED EXTRAMURAL PROPOSALS

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Brosnahan, M.	CVM	Equine Medicine	Eosinophil Phenotypes and Function in Normal, Obese and Aging Horses	11/1/2023	\$30,039	American Quarter Horse Association	10/1/2024
Brosnahan, M.	CVM	Equine Medicine	A Comparative Immunological Study of the In Vitro Immune Response to a Recombinant Coccidioides Antigen by Canine and Equine Leukocytes	3/1/2024	\$6,000	Veterinary and Comparative Clinical Immunology Society	8/1/2024
Brosnahan, M.	CVM	Equine Medicine	Profiling Oral and Peripheral Blood Immune Status of Horses with and without Equine Odontoclastic Tooth Resorption and Hypercementosis (EOTRH)	6/30/2024	\$40,476	American Association of Equine Practitioners Foundation	9/1/2024
Gartrell, C.	CVM	Veterinary Medicine	Animal Health and Disease Research (2024)	10/24/2023	\$19,035	USDA	10/1/2023
Gartrell, C., Ferguson, S., & De Luca, E.	CVM	Veterinary Medicine	Boehringer Ingelheim Veterinary Scholars Program (2024)	10/15/2023	\$42,800 (includes a \$19,700 match from MWU)	Boehringer Ingelheim	1/1/2024
Goe, A.	CVM	Pathology and Population Medicine	Pharmacokinetics and Safety Evaluation Following a Single Dose of Oral and Intramuscular Robenacoxib in Great Horned Owls (Bubo virginianus)	12/15/2023	\$19,705	American Association of Zoo Veterinarians	7/1/2024
Goe, A. & Bautista, J.	CVM	Pathology and Population Medicine	Pharmacokinetics and Safety Evaluation Following a Single Subcutaneous Dose of Robenacoxib in Great Horned Owl (Bubo virginianus)	8/25/2023	\$3,925	North American Falconers Association	1/1/2024
Goe, A. & Bautista, J.	CVM	Pathology and Population Medicine	Pharmacokinetics and safety evaluation of a single robenacoxib dose in great horned owl (Bubo virginianus)	12/15/2023	\$4,600	National Wildlife Rehabilitators Association	1/1/2024
Lee, J.K.	CVM	Pathology and Population Medicine	Temporally-Controlled Histamine Delivery and Staged Anti-Inflammatory Action through Binary Electrospun Fibers for Enhanced Wound Healing	4/3/2024	\$17,291	NIH R21 subaward from Arizona State University	9/1/2024

CVM: SUBMITTED EXTRAMURAL PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Lee, J.K.	CVM	Pathology and Population Medicine	Serograft: A Bioinspired Acellular Biomaterial for Combating Tissue Adhesions	4/2/2024	\$17,291	NIH R21 subaward from Arizona State University	12/1/2024
Lee, J.K.	CVM	Pathology and Population Medicine	Mechanisms of Wound Healing Regulation by an Epidermal Serpin	6/3/2024	\$59,391	NIH R01 subaward from Arizona State University	4/1/2024
Lee, J.K.	CVM	Pathology and Population Medicine	A Mechanistic Investigation of Serpin B3 and its Role in Psoriasis	5/23/2024	\$75,372	NIH R01 subaward from Arizona State University	4/1/2024
Li, W.	CVM	Veterinary Medicine	Identification of CD8 T Cell Epitopes and Exploring the Role of CD8 T Cells in C. muridarum-infected Mouse Model	2/23/2024	\$420,785	NIH R15	9/1/2024
Rayhel, L. & Cavender, A.	CVM	Small Animal Internal Medicine	Global FAST Point-of-Care Ultrasound Assessment of Dogs with Pulmonary Coccidioidomycosis in Comparison with other Respiratory Diseases and Healthy Dogs	2/1/2024	\$5,331	Morris Animal Foundation	2/1/2024

Total of CVM Submitted Extramural Proposals: \$762,041

MWU SUBMITTED 93 EXTRAMURAL PROPOSALS FROM ALL COLLEGES THROUGH Q4 OF FISCAL YEAR 2024 TOTALING \$35,927,616

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Mitchell, J., Fitzgerald, N., Chen, G. & Wooden, E.	CDMA, AZCOM	Multidisciplinary	An Inch-loss Study Using the NovoPod Photomodulation Bed	\$150,000 (Value of)	Thor Photomedicine	6/1/2018	Open

Total of Multidisciplinary Active Extramurally-funded Research Awards: \$150,000

**ARIZONA COLLEGE OF OSTEOPATHIC MEDICINE (AZCOM): ALL ACTIVE EXTRAMURALLY-FUNDED
RESEARCH AWARDS DURING THE REPORTING PERIOD**

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
O'Hare, T. & Nydam, R.	AZCOM	Academic Assessment	2022 NBOME C3DO Proposal (Pilot A)	\$75,000	National Board of Osteopathic Medical Examiners	1/1/2023	7/31/2023

Total of AZCOM Active Extramurally-funded Research Awards: \$75,000

**ARIZONA COLLEGE OF OPTOMETRY (AZCOPT): ALL ACTIVE EXTRAMURALLY-FUNDED
RESEARCH AWARDS DURING THE REPORTING PERIOD**

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Esposito, C. & Feis, A.	AZCOPT	Optometry	Home Visual Acuity Testing Study (X06)	\$12,750	National Eye Institute Cooperative Agreement with Jaeb Center for Health Research, Inc.	8/1/2021	4/18/2024
Feis, A.	AZCOPT	Optometry	A Randomized Trial to Evaluate Sequential vs Simultaneous Spectacles plus Patching for Amblyopia in Children 3 to <13 Years Old (ATS22)	\$17,400	National Eye Institute Cooperative Agreement with Jaeb Center for Health Research, Inc.	2/26/2021	12/10/2024
Vasudevan, B.	AZCOPT	Optometry	A Multi-center, Double-masked, Randomized, Placebo-controlled, Phase 3 Study of the Safety and Efficacy of Atropine 0.1% and 0.01% Ophthalmic Solutions Administered with a Microdose Dispenser for the Reduction of Pediatric Myopia Progression (The CHAPERONE Study)	\$313,000	Eyenovia	9/1/2019	8/31/2023

Total of AZCOPT Active Extramurally-funded Research Awards: \$343,150

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Deligio, D.	CCO	Optometry	Clinical Evaluation for a Silicone Hydrogel Daily Wear Monthly Replacement Contact Lens	\$59,638	Alcon	11/16/2022	4/26/2024
Prestwich, C.	CCO	Optometry	A Randomized Trial to Evaluate Sequential vs Simultaneous Spectacles plus Patching for Amblyopia in Children 3 to <13 Years Old (ATS22)	\$23,350	National Eye Institute Cooperative Agreement with JAEB Center for Health Research, Inc.	4/13/2021	7/28/2025
Rice, S.	CCO	Optometry	A Multi-center, Double-masked, Randomized, Placebo-controlled, Phase 3 Study of the Safety and Efficacy of Atropine 0.1% and 0.01% Ophthalmic Solutions Administered with a Microdose Dispenser for the Reduction of Pediatric Myopia Progression (The CHAPERONE Study)	\$313,000	Eyenovia	2/1/2020	2/12/2025

Total of CCO Active Extramurally-funded Research Awards: \$395,988

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Mitchell, J., Haering H., Carroll, A., Beals, D., & Carpenter, R.	CDMA	Dental Medicine, Dental Institute	Bicon SHORT® Implants: A Preclinical and Clinical Research Study	\$949,363 (Value of)	Bicon Dental Implants	5/6/2016	Open
Mitchell, J.	CDMA	Dental Institute	Comparison Wear Study of Plaque-Buster Toothbrush with Flossing Bristles	\$1,125 (Value of)	TiFinity, LLC	7/6/2021	8/31/2024
Mitchell, J.	CDMA	Dental Medicine	Uniquely High Conversion and Mechanically Robust Composite Materials for Functionally Elevated Performance	\$70,300	NIH R21 Subaward from the University of Colorado	9/5/2023	9/4/2025
Mitchell, J. & Agostini-Walesch, G.	CDMA	Dental Medicine	Oral Inflammation and Functional Gastrointestinal Disorders: A Practice-Based Research Approach	\$3,404,111	NIH U01 with a Subaward to University of Chicago (\$1,017,628)	9/13/2023	6/30/2028

Total of CDMA Active Extramurally-funded Research Awards: \$4,424,899

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Rocha de Oliveria Carrilho, M.	CDMI	Dental Medicine	Blending Dentin to Dentin: Biometric Hydrogels for Dentin Tissue Engineering	\$421,800	NIH R15	9/7/2023	8/31/2026
Williams, L.	CDMI	Dental Medicine	The Senior Series	\$1,730	Chicago Dental Society	6/1/2023	9/1/2023

Total of CDMI Active Extramurally-funded Research Awards: \$423,530

CGS: 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., Shim, M., & Broderick, T.	CGS	Physiology, Biochemistry & Molecular Genetics	Involvement of the Brain-muscle Axis in Western Diet Induced Alzheimer's Pathology	\$23,250 (includes a \$8,943 match from MWU)	Arizona Alzheimer's Consortium	7/1/2023	6/30/2024
Baab, K.	CGS	Anatomy	Testing Adaptive Hypotheses of Plio-Pleistocene Hominin Craniofacial Evolution	\$330,021	National Science Foundation	2/15/2021	1/31/2025
Bae, N.	CGS	Biochemistry & Molecular Genetics	Assessing the DNA Binding Properties of the Human Telomere Protection Protein RAP1	\$17,500 (includes a \$6,731 match from MWU)	Arizona Alzheimer's Consortium	7/1/2023	6/30/2024
Broderick, T.	CGS	Physiology	Mechanistic Role of Vascular Dysfunction in TBI-mediated Cognitive Dysfunction	\$28,760	Phoenix VA Health Care System	4/15/2021	5/31/2024
Bussey, K.	CGS	Precision Medicine	Training in Genomics Research (TiGeR)	\$22,000	NIH R25 subaward from Arizona State University	8/1/2023	6/30/2028
Hernandez, J.	CGS	Biochemistry & Molecular Genetics	Structural Elucidation of a Small Molecular Chelator to Combat Bacterial Infections in Dogs	\$10,800	Morris Animal Foundation	3/1/2022	2/28/2024
Hughes, T.	CGS	Master of Public Health	Mild Cognitive Impairment: A Prospective Community Study	\$65,078	NIH R01 subaward from University of Pittsburgh	8/28/2023	2/28/2025
Hull, E.	CGS	Biomedical Sciences	Elucidating a Mechanistic Link Between Progranulin and Lysosomal Function in Alzheimer Disease	\$30,000	Arizona Alzheimer's Consortium	7/1/2023	6/30/2024
Hull, E.	CGS	Biomedical Sciences	Progranulin Transport & Processing: Implications for Development of New Alzheimer's Therapies	\$15,000 (includes a \$5,769 match from MWU)	Arizona Alzheimer's Consortium	7/1/2023	6/30/2024
Jadavji, N.	CGS	Biomedical Sciences	Faculty Job Market Research	\$43,750	Burroughs Welcome Fund	10/15/2021	3/31/2024
Jentarra, G.	CGS	Precision Medicine	Targeting Fatty Acid Metabolism in Alzheimer's Disease: A Special Interest in Lauric Acid	\$67,545	NIH R21 subcontract from Florida International University	6/1/2021	8/15/2023
Jentarra, G. & Jones, T.B.	CGS	Precision Medicine, Anatomy	Evaluation of Regional Differences in Bacterial DNA Presence in the Brain Tissue of Alzheimer's Disease Patients and Controls	\$61,524 (includes \$30,000 salary and \$11,524 matches from MWU)	Arizona Alzheimer's Consortium	7/1/2023	6/30/2024
Jung, H.	CGS	Anatomy	Developmental and Functional Integration in the Axial Skeleton of Anthropoids	\$9,760	The Leakey Foundation	9/1/2023	7/31/2024
Kim, C.	CGS	Biochemistry & Molecular Genetics	Molecular Basis of the Selective Assembly of Functionally Distinct PRC1s	\$450,000	NIH R15	9/22/2022	8/31/2025
Kim, J.E., & Leslie, E.	CGS	Anatomy	Mapping Variation in Skeletal Aging with Quantitative Ultrasound Cortical Bone Speed of Sound and Its Potential as a Novel Age-at-Death Estimator	\$20,000	Wenner-Gren Foundation for Anthropological Research	1/1/2023	12/31/2024
Martinez-Guryn, K.	CGS	Biomedical Sciences	The Role of Gut Mycobiota in Regulating Host Lipid Absorption and Obesity	\$471,111	NIH R21 Diversity with subawards to Univ of Wisc (\$137,996) and Univ of Tenn Health Sci Center (\$48,086)	5/1/2022	4/30/2025

CGS: ALL ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS (Continued)

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Martinez-Guryn, K.	CGS	Biomedical Sciences	Probing Short and Long Term Consequences of Small and Large Bowel Microbiota Transplants on Host Physiology: Implications for the Development of Future Live Biotherapeutics	\$774,044	NIH R01 MPI subaward from the University of Chicago	2/1/2024	12/31/2027
Molehin, A.	CGS	Microbiology & Immunology	Antigen and Adjuvant Selection for a Vaccine Against Urogenital Schistosomiasis, HematoShield	\$168,600	NIH R41 subaward from PAI Life Sciences, Inc	1/3/2024	12/31/2024
O'Neill, M.	CGS	Anatomy	Collaborative Research: The Effects of Musculoskeletal Design on Bipedal Walking and Running Performance in Humans, Chimpanzees and Early Hominims	\$259,885	National Science Foundation	3/1/2021	2/28/2026
Prakapenka, A.	CGS	Biomedical Sciences	Alzheimer's Disease Pathogenesis in Mothers: A Role for Age and Menopause	\$249,946	Alzheimer's Association	9/1/2023	8/31/2026
Revill, A.	CGS	Physiology	Cholinergic Modulation of XII Motoneurons and XII Premotoneurons	\$447,700	NIH R15	7/20/2020	6/30/2024
Riede, T.	CGS	Physiology	Collaborative Research: Evolution of Long-distance Communication in Vocal Rodents	\$193,774	National Science Foundation	8/1/2018	7/31/2023
Riede, T.	CGS	Physiology	The Role of Vocal Ligament in Fundamental Frequency and Adduction Control	\$192,212	NIH R01 subcontract from the University of Utah	1/1/2020	12/31/2024
Riede, T.	CGS	Physiology	The Influence of Vocal Loading Upon the Healing of Experimental Vocal Fold Injury	\$404,500	NIH R21	8/1/2022	7/31/2025
Shim, M.	CGS	Biochemistry & Molecular Genetics	Cyclooxygenase-2 Signaling in Cell Senescence and its Role in Chemotherapy-induced Long-term Adverse Sequelae	\$450,000	NIH R15	12/1/2019	11/30/2023
Shim, M., Al-Nakkash, L., & Broderick, T.	CGS	Biochemistry & Molecular Genetics, Physiology	Geroscience Approach to Alzheimer's Disease: Mitigation of Cellular Senescence by Intermittent Fasting	\$21,450 (includes a \$8,249 match from MWU)	Arizona Alzheimer's Consortium	7/1/2023	6/30/2024
Smith, H.	CGS	Anatomy	Improving the Diagnosis of Orthopedic, Shell, and Respiratory Tract Diseases, and Mapping Vascular Anatomy in Captive Tortoises Using CT Scans and Radiography	\$2,500	Association of Reptile and Amphibian Veterinarians	3/1/2023	2/29/2024
Smith, H.	CGS	Anatomy	Recovery of a New Campanian Fossil Turtle Assemblage from the Menefee Formation, New Mexico	\$1,000	Western Interior Paleontological Society	5/1/2023	4/30/2024
Smith, H.	CGS	Anatomy	Unlocking the Senescence-resistant Adaptations of Long-lived Giant Tortoises to Develop a Novel Model Organism for Aging Studies	\$33,000	Impetus Grants	12/1/2023	11/30/2025
Swanson, M.	CGS	Biochemistry & Molecular Genetics	Determining the molecular mechanism of activation of γ -secretase by the telomere protein RAP1	\$21,276 (includes a \$8,184 match from MWU)	Arizona Alzheimer's Consortium	7/1/2023	6/30/2024
Townsend, K.E.B.	CGS	Anatomy	Collaborative Research: After the Bridgerian Crash - An Integrated Analysis of Mammalian Paleocommunities and Paleoecologies During the Middle Eocene	\$239,596	National Science Foundation with a subcontract (\$20,000) to the Rochester Museum and Science Center	5/15/2020	4/30/2025
Veilleux, C.	CGS	Anatomy	Grasping our Evolutionary Origins: Unraveling the Anatomical and Molecular Adaptations of Primate Touch	\$625,000	NSF with subcontracts to Univ of Calgary (\$146,868) and Oregon Health and Sci Univ (\$30,196)	9/1/2022	8/31/2027

CGS: ALL ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS (Continued)

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Velez-Cruz, R.	CGS	Biochemistry & Molecular Genetics	The Role of SWI/SNF Chromatin Remodelers in Homologous Recombination and Genome Stability	\$449,330	NIH R15	8/10/2022	7/31/2025

Total of CGS Active Extramurally-funded Research Awards: \$6,199,912

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Mahaffey, L.	CHS-DG	Occupational Therapy	Tiered Occupational Therapy (TOT): Preparing Occupational Therapist to Service on School Mental Health Teams	\$1,148,134	U.S. Department of Education	10/1/2023	9/30/2028

Total of CHS-DG Active Extramurally-funded Research Awards: \$1,148,134

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Black, D.	CHS-GD	Physician Assistant	Oral Health Interdisciplinary Lunch and Learn	\$988	nccPA Health Foundation	1/9/2023	9/13/2024
Bouton, M.	CHS-GD	Physician Assistant	AAPA-PAEA Research Fellowship	\$22,248	PA Education Association	11/1/2023	10/31/2024
Brobeck, T. & Wash, E.	CHS-GD	Speech-Language Pathology	MWU Parkinson Voice Project Program Development Grant	\$500	Parkinson Voice Project	4/11/2023	3/31/2024
Eikenberry, M.	CHS-GD	Physical Therapy	Patient-adaptive Robotic Balance Training for Lower-extremity Stroke Rehabilitation	\$10,128	Arizona Biomedical Research Center sub-award from Arizona State University	7/1/2021	6/30/2024
Eikenberry, M.	CHS-GD	Physical Therapy	CAREER: Transparent Robot-aided Rehabilitation (TRAIN)	\$10,221	National Science Foundation subcontract from Arizona State University	1/1/2021	2/28/2025
Fissel, S.	CHS-GD	Speech-Language Pathology	Translational Adapted Groups: Community Builds Capacity for School SLPs	\$1,274,578	U.S. Department of Education	10/1/2023	9/30/2028

Total of CHS-GD Active Extramurally-funded Proposals: \$1,318,663

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Briyal, S.	CPDG	Pharmaceutical Sciences	Mentor and Train PCCM and NPM Fellows for Scholarly Activities	\$70,000	Advocate Health and Hospitals Corporation	1/1/2023	12/31/2025
Huang, V.	CPG	Pharmacy Practice	Utilizing Weighted-incidence Syndromic Antibigram to Evaluate Institution-specific Antibiotic Therapies and Antimicrobial Resistance Trends in Community-acquired Infections Across a Community-teaching Health System	\$45,736	Merck	12/1/2023	11/30/2025
Huang, V.	CPG	Pharmacy Practice	A Multicenter Evaluation of Vancomycin-associated Nephrotoxicity in Hospitalized Patients with Acute Bacterial Skin and Skin Structure Infections	\$4,500	Motif BioSciences, Inc	6/1/2018	Open

COP: ALL ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS (Continued)

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Huang, V. & Volker, S.	CPG	Pharmacy Practice	Evaluation of Prevalence of Minocycline Heteroresistance in Clinical <i>Acinetobacter baumannii</i> Isolates	\$27,930	American College of Clinical Pharmacy Research Institute	9/1/2023	8/31/2024
Merker, A.	CPDG	Pharmacy Practice	Illinois SPF Rx Project	\$1,374,677	IL Dept of Health and Human Services, Substance Abuse, Mental Health Administration, Center for Substance Abuse Prevention	9/22/2021	12/31/2023
Pais, G.	CPDG	Pharmaceutical Sciences	Cefepime Physiologically-based Pharmacokinetic Models for Cross-Species Extrapolation	\$231,480	NIH K12 Training Grant	12/1/2023	11/30/2025
Rhodes, N.J.	CPDG	Pharmacy Practice	Systems-based Pharmacologic Modelling to Elucidate Beta-lactam Clinical Pharmacodynamics and Define Optimal Dosing Regimens in Severe Pneumonia	\$3,403,378	NIH R01 with subawards to Northwestern University (\$1,121,735) and Children's Hospital of LA (\$325,820)	7/11/2022	6/30/2027
Rhodes, N.J.	CPDG	Pharmacy Practice	Development and Validation of CRRT-specific Beta-lactam Population Pharmacokinetic Models to Guide Treatment for Patients with Hospital-acquired Pneumonia	\$399,991	FDA with a subaward to Northwestern University (\$169,984)	9/30/2022	9/29/2025
Rhodes, N.J.	CPDG	Pharmacy Practice	Consensus Recommendations for the Use of Individualized Drug Dosing in Patients Receiving Beta-lactam Antibiotics	\$2,640	American College of Clinical Pharmacy	2/3/2023	2/3/2024
Rhodes, N.J.	CPDG	Pharmacy Practice	Development and Evaluation of CRRT-specific Precision Dosing Models to Optimize Beta-lactam Treatment for Patients with Hospital-acquired Pneumonia	\$417,308	NIH R21 with subaward to Northwestern University (\$169,137)	6/23/2023	5/31/2025
Scheetz, M.	CPDG	Pharmacy Practice	Assessment of MODS and Personalized Exposure of Antibiotics (AMPLE)	\$897,451	NIH R01 Multi-PI with Children's Hospital of Philadelphia	9/22/2021	8/31/2026
Scheetz, M.	CPDG	Pharmacy Practice	Patient-oriented Research on <i>Pseudomonas aeruginosa</i>	\$39,760	NIH K24 subaward from Northwestern University	2/22/2020	1/31/2025
Scheetz, M.	CPDG	Pharmacy Practice	Nevakar Compound Analysis	\$140,734	Nevakar	9/9/2020	Open
Scheetz, M.	CPDG	Pharmacy Practice	A Randomized Clinical Trial of Continuous vs. Intermittent Infusion Vancomycin: Effects on Measured GFR and Kidney Injury Biomarkers	\$119,604	NIH R21 Clinical Trial subaward from the University of Kentucky	1/20/2023	12/31/2024
Scheetz, M.	CPDG	Pharmacy Practice	Antibacterial Resistance Leadership Group (ARLG)	\$11,739	NIH UM1 subaward from Duke	6/1/2023	11/30/2023
Scheetz, M.	CPDG	Pharmacy Practice	Antibacterial Resistance Leadership Group (ARLG)	\$27,434	NIH UM1 subaward from Duke	12/1/2023	11/30/2024
Scheetz, M.	CPDG	Pharmacy Practice	The Pediatric sEpiS induced MODS: Relationship of Immune-phenotypes and antiBiotic Exposures (PRESCRIBE) Study	\$76,165	NIH R01 subaward from Children's Hospital of Philadelphia	6/19/2023	5/31/2028
Scheetz, M.	CPDG	Pharmacy Practice	Elucidating the Temporal Mechanism of Vancomycin Kidney Toxicity as a Means to Prevent Injury	\$356,876	NIH R21 with foreign subawards to University of West Attica (\$72,576) and Università Degli Studi Di Cagliari (\$93,312)	6/26/2023	5/31/2025
Weissig, V.	CPG	Pharmaceutical Sciences	Validation and Development of Nanoliposomes for Neuroprotection in Stroke	\$49,602	Arizona Biomedical Research Centre Subaward from the Arizona Veterans Research and Education Foundation	6/1/2023	12/31/2025

Total of COP Active Extramurally-funded Research Awards: \$7,697,005

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Chako, C. & Gartrell, C.	CVM	Veterinary Medicine	Animal Health and Disease Research	\$11,899	USDA	10/1/2022	9/30/2024
Chako, C., Ziegler, J., Kretsch-York, C., & Oman, R.	CVM	Farm Animal Medicine	Enhanced Education in Rural Food Animal Practice Dedicated Training for Veterinary Students and Exposure for Native American Youth	\$244,491	USDA	9/1/2023	8/31/2026
Gartrell, C.	CVM	Veterinary Medicine	Animal Health and Disease Research	\$19,035	USDA	10/1/2023	9/30/2025
Gartrell, C., Ferguson, S., & DeLuca, E.	CVM	Veterinary Medicine	2024 Boehringer Ingelheim Veterinary Scholars Program	\$42,800 (includes a \$19,700 match from MWU)	Boehringer Ingelheim	1/1/2024	12/31/2024
Goe, A. & Bautista, J.	CVM	Pathology and Population Medicine	Pharmacokinetics and Safety Evaluation of a Single Robenacoxib Dose in Great Horned Owl (<i>Bubo virginianus</i>)	\$4,600	National Wildlife Rehabilitators Association	1/1/2024	12/31/2024
Kreisler, R.	CVM	Shelter Medicine	The 1000 Canine (1K-9) SARS-CoV-2 Surveillance Study: Exploration of SARS-CoV-2 Exposures and Transmission Pathways Among Different Domestic Canine Populations	\$121,000	USDA subaward from the Translational Genomics Research Institute (TGen)	7/3/2024	5/31/2025
Lopez, B.	CVM	Veterinary Medicine	Host-Pathogen Interaction During Cryptosporidiosis - A Model for Disease Pathogenesis and Discovery of Effective Therapeutics	\$454,012	USDA National Institute of Food and Agriculture with a subcontract (\$27,871) to the University of Georgia	7/1/2021	6/30/2025
Okwumabua, O.	CVM	Veterinary Medicine	Animal Health and Disease Research	\$11,375	USDA	10/1/2021	9/30/2023
Rayhel, L. & Cavender, A.	CVM	Small Animal Internal Medicine	Global FAST Point-of-Care Ultrasound Assessment of Dogs with Pulmonary Coccidioidomycosis in Comparison with other Respiratory Diseases and Healthy Dogs	\$5,331	Morris Animal Foundation	2/1/2024	4/30/2024
Struthers, J.	CVM	Veterinary Medicine	Optimizing a Patient-specific Larynx Implant for Functional Restoration after Cancer Surgery	\$58,112	NIH R01 subcontract from the Mayo Clinic	9/1/2021	8/31/2026
Waitt, L.	CVM	Veterinary Medicine	League of VetaHumanz MWU Chapter: This is How We 'Role'	\$6,000	NIH R25 subcontract from Purdue University	1/1/2021	7/31/2024

Total of CVM Active Extramurally-funded Proposals: \$978,655

CLINICAL RESEARCH SERVICES (CRS): ALL ACTIVE EXTRAMURALLY-FUNDED RESEARCH AWARDS DURING THE REPORTING PERIOD

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
VanDenBerg, C.	n/a	Abrazo Arizona Heart Hospital	Medical Device Study in Patients with Cardiovascular Disease	\$177,116	Medical Device Sponsor with a subcontract (\$23,355) to Abrazo Hospitals and Consultant Costs of \$21,000	11/1/2018	Open
VanDenBerg, C.	n/a	Clinical Research Services	Multiplexed In-solution Serological Test for SARS-CoV-2, Human Coronaviruses and Other Respiratory Pathogens	\$494,170	Leidos Biomedical Research, LLC (NIH) subcontract from Arizona State University	10/01/2020	09/30/2023

Total of CRS Active Extramurally-funded Research Awards: \$671,286

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 RESEARCH AWARDS: \$23,826,222

Barletta, J. F. (COP), Shirah, G. R., Mangram, A. J., Sucher, J. F., Hostert, S. A., Bruce, K., Springs, H., & **Zach, V.** (AZCOM). (2023). Reversal of pre-injury factor-Xa inhibitors with prothrombin complex concentrates in patients following traumatic brain injury. *Clinical neurology and neurosurgery*, 235, 108040.

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- Rudy, S. L. (AZCOM), Wealing, J. C. (AZCOM), Banayat, T. (CGS), Black, C. (AZCOM), Funk, G. D., & Revill, A. L. (CGS).** (2023). A muscarinic, GIRK channel-mediated inhibition of inspiratory-related XII nerve motor output emerges in early postnatal development in mice. *Journal of applied physiology (Bethesda, Md. : 1985)*, *135*(5), 1041–1052.
- Sangalli, L. (CDMI), Alabsy, M. (CDMI), Lingle, D. (CHS), Khazaal, N. (CGS), West-Pelak, E. (CDMI), & Mitchell, J. C. (CDMI).** (2023). Hand joint hypermobility among dental students—A cross-sectional study. *Applied Sciences*, *13*(12), 7158.
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- Vohra, A. (CCOM), Keefe, P. (CCOM), & Puthanveetil, P. (CGS)** (2024). Altered metabolic signaling and potential therapies in polyglutamine diseases. *Metabolites*, *14*(6), 320.
- Yoo, H. (CDMI), Gao, F. (CDMI), Agostini-Walesch, G. (CDMA), Alabsy, M. (CDMI), Mitchell, J. C. (CDMA), & Carrilho, M. R. (CDMI).** (2024). Use of marine occurrent extracts to enhance the stability of dentin extracellular matrix. *Journal of the mechanical behavior of biomedical materials*, *154*, 106498.
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- Munson, H. E.**, De Simone, L., Schwaede, A., Bhatia, A., Mithal, D. S., Young, N., Kuntz, N., & Rao, V. K. (2023). Axonal polyneuropathy and ataxia in children: consider Perrault Syndrome, a case report. *BMC medical genomics*, 16(1), 278.
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ISSUED PATENTS

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Anil Gulati (COP) Compositions and Methods for Treating Neuropsychiatric Disorders Using an Endothelin-B Receptor Agonist. Canadian Patent Number: 2917325. Issue Date: 9/5/2023

Anil Gulati (COP) Compositions and Methods for Treating Neuropsychiatric Disorders Using an Endothelin-B Receptor Agonist. Japanese Patent Number: 7385924. Issue Date: 11/15/2023

Anil Gulati & Shridhar Andurkar (COP) Methods and Compositions for Hypotensive Resuscitation. Indian Patent Number: 534706. Issue Date: 4/24/2024

Mark Olsen (COP) Isotopically-Stabilized Tetronimide Compounds. U.S. Patent Number: 11,897,857. Issue Date: 2/13/2024

INTRAMURAL FUNDING

AZCOM

Investigator/s	College	Department	Proposal Title
Ashurst, J.	AZCOM	Medicine	A Protocolized Treatment Lymphatic Drainage Strategy to Reduce Lower Extremity Swelling in a Healthy Population: A Pilot Study
Brown, S.	AZCOM	Medicine	Effect of Osteopathic Manipulative Therapy of the Pubic Symphysis on Gait: A Pilot Study

Total AZCOPT Intramural Funding: \$9,100

AZCOPT

Investigator/s	College	Department	Proposal Title
Esposito, C.	AZCOPT	Optometry	Deposition of Tau and Amyloid-beta in the Tear Film of Acquired & Traumatic Brain Injury Patients
Gantes-Nunez, J.	AZCOPT	Optometry	Correlation between the Contrast Sensitivity Function and the Pupillary Light Reflex
Gantes-Nunes, J.	AZCOPT	Optometry	Design and Calibration of a Low-cost Hartmann Wavefront Sensor for Refraction Test
Kozlowski, M.	AZCOPT	Optometry	Comparison of the Effects of NGF and PACAP on Corneal Healing
Kozlowski, M.	AZCOPT	Optometry	Evaluation of a Potentially More Robust Animal Model System of AMD
Roe, M.	AZCOPT	Optometry	Impact of Time of Day on Binocular Vision
Vasudevan, B.	AZCOPT	Optometry	External Programmer Services to Enhance Virtual Reality Testing Software
Vasudevan, B.	AZCOPT	Optometry	Study the Effects of Intense Pulsed Light on Immortalized Human Corneal Cells
Vasudevan, B.	AZCOPT	Optometry	Assessment of the Magnitude of Inflammatory Markers in Dry Eye Patients
Yeh, F.	AZCOPT	Optometry	The Effect of Corneal Crosslinking on Keratoconic Eyes

Total AZCOPT Intramural Funding: \$32,003

CCO

Investigator/s	College	Department	Proposal Title
Collison, F.	CCO	Optometry	Contrast Sensitivity in the Presence of Noise in Early Macular Dysfunction
Conroy, J.	CCO	Optometry	The Effects of Temperature on Rigid Gas Permeable Contact Lens Parameters
Gialousakis, J.	CCO	Optometry	The Daily Change in Refractive Error with Orthokeratology Lenses
Chakraborty, A. Quan, A., Prestwich, C.	CCO	Optometry	The Effect of Non-invasive Brain Stimulation in Adults with Symptomatic Convergence Insufficiency: A Clinical Trial
Lau, J.	CCO	Optometry	The Effects of Electric vs. Microwavable Warm Compresses on Dry Eye Patients
Rice, S., Prestwich C., Kehbein K., Chakraborty A.	CCO	Optometry	The Relationship Between Visual Perception, Visuomotor Skills, IQ, and Standardized Test Performance

Total CCO Intramural Funding: \$12,919

CGS

Investigator/s	College	Department	Proposal Title
Al-Nakkash, L.	CGS	Physiology	Influence of Intermittent Fasting on Intestine
Bae, N.	CGS	Biochemistry & Molecular Genetics	Effects of the Telomere-Protection Protein RAP1 on Amyloid Plaque Formation Via γ -secretase Activity Modulation
Bjork, B.	CGS	Biochemistry & Molecular Genetics	Prdm16 and Prdm3 in Developing Mouse Craniofacial Bone, Mandible, and Palate Development

INTRAMURAL FUNDING

CGS (Continued)

Investigator/s	College	Department	Proposal Title
Bodenstine, T.	CGS	Biochemistry & Molecular Genetics	Role of Cadherin-11 in Oral Squamous Cell Carcinoma Subpopulations During Metabolic Reprogramming
Buhlman, L.	CGS	Biomedical Sciences	Evaluating Mechanisms of Mn Porphyrin Ring Antioxidant in a Drosophila melanogaster model of Parkinson's Disease
Bussey, K.	CGS	Precision Medicine	Investigating Unicellular Essential Genes as Therapeutic Targets in Cancer
Call, G.	CGS	Pharmacology	Kidney Stone Analysis in Parkinson's Disease Model Flies
Ciancio, M.	CGS	Biomedical Sciences	Impact of Heat Shock Protein 70 Expression on Small Intestinal Glucose Transport
Ebeid, M.	CGS	Anatomy	Investigating the Combined Role of Prdm16 and Mecom in Mouse Cochlear Development and Hearing
Eckman, D.	CGS	Biomedical Sciences	Cerebrovascular Function in Adult Male and Female Offspring Exposed to Dexamethasone In Utero
Edwards, J.	CGS	Pharmacology	Effects of the Environmental Toxicant Cadmium and Histamine/Antihistamine Drugs on the MIN6 Pancreatic Beta-cell Line
Fay, M.	CGS	Pharmacology	Cadmium Dysregulates tRNA Expression in Human Renal Proximal Tubule Epithelial Cells
Fornaro, M.	CGS	Anatomy	Determining the Role of Pericytes in Neurorestoration Induced by IRL1620 Treatment after Injury
Gadagkar, S.	CGS	Biomedical Sciences	Studying the Genetic Basis of Phenotypic Diversity with Comparative Transcriptomics
Georgi, J.	CGS	Anatomy	Panniculus Carnosus and the Pectoralis Muscles in Tetrapods
Gonzalez, F.	CGS	Microbiology & Immunology	Modulation of Candida Biofilms by the Inhibition of the 26S Proteasome
Goral, J.	CGS	Anatomy	Characterization of the Role of 4NQO-Induced Histopathology in Lungs and Liver, the Role of Dietary Fat and Folate
Grossman, A.	CGS	Anatomy	Recently Recovered Fossils from the Miocene Deposits of the Hazeva and Hordos Formations in Israel
Haley, N.	CGS	Microbiology & Immunology	Environmental Sampling in Small Animal Shelters for the Detection of Canine Parvovirus and Circovirus
Hall, M.	CGS	Anatomy	Anatomy of the Peripheral Nervous System in Human and Nonhuman Primates
Heesy, C.	CGS	Anatomy	Quantifying Normal Growth and Aging Variation in Macaque Retinal Ganglion Cell Topography
Hnida, J.	CGS	Microbiology & Immunology	Coccidia of White-tailed Antelope Squirrel, and Gray-collared Chipmunk, and Golden-mantled Ground Squirrel Populations in Northern Arizona
Hull, E.	CGS	Biomedical Sciences	Identification of Epigenetic Factors in Tumor Cell Plasticity: SWI/SNF Chromatin Remodeling Activity
Jones, T.	CGS	Anatomy	Evaluation of Antioxidant Treatment on Development, Survival, and Locomotor Function in a Drosophila melanogaster Model of Parkinson Disease
Korch, S.	CGS	Pharmacology	Analysis of Mitochondrial Respiration in HeLa Cancer Cells as a Function of Energy Status
Kopf, P.	CGS	Pharmacology	Kratom Alkaloids and Adrenal Steroidogenesis
Kristjansdottir, K.	CGS	Biomedical Sciences	Examining the Role of NPM1 and PARP in Regulating PD-L1 Levels in Triple-negative Breast Cancer Cells
Lawson, K.	CGS	Biochemistry & Molecular Genetics	Cadherin-dependent Signaling in Oral Tumor Development
Lee, A. H.	CGS	Anatomy	The Nature, Function and Evolutionary Significance of Chondroid Bone in Birds
LePard, K.	CGS	Biomedical Sciences	Factors Impacting GLUT2 Translocation in Pancreatic Islets from T2DM Mice

INTRAMURAL FUNDING

CGS (Continued)

Investigator/s	College	Department	Proposal Title
Leyva, K. J.	CGS	Microbiology & Immunology	Exosome-Mediated Regulation of EMT in Cutaneous Squamous Cell Carcinoma
Lynch, L.	CGS	Anatomy	Determining the Effects of Environmental Teratogens in River Systems on the Evolution of CNS Development Genes Across Clades
Molehin, A.	CGS	Microbiology & Immunology	Evaluation of a Next Generation Sj-p80 Vaccine Against Asiatic schistosomiasis
Mayer, A. M. S.	CGS	Pharmacology	Effect of Cyanobacterial LPS on Immune Activation of Human De-identified Brain Cultures and Human HMC3 Microglia Cell Line
McCulloch, P.	CGS	Physiology	Brainstem Cardiorespiratory Control Mechanisms
Norris, J.	CGS	Pharmacology	Minimum Inhibitory Concentration of Cefovecin Sodium Following Prolonged Storage at Three Temperatures
Olson, C.	CGS	Physiology	Behavioral, Diel and Age-related Patterns of Vitamin A Signaling with Vocal Production
Pierce, M.	CGS	Pharmacology	Identification of Novel Neuroactive Marine Natural Products for Neuroscience Drug Development
Plotkin, B.	CGS	Microbiology & Immunology	Anaerobic Metabolic Rewiring and Cancer Cell Migration
Porta, M.	CGS	Physiology	The Memory of Pregnancy of the Uterus: Contractility
Revell, A.	CGS	Physiology	Effects of Chronic Intermittent Hypoxia on Control of Airway Tone
Rodriguez Sosa, J.	CGS	Anatomy	Transplantation of Spermatogonial Stem Cells and Sertoli Cells from pig to Mouse Testes to Evaluate Their Ability to Generate Spermatogenesis
Sigar, I.	CGS	Microbiology & Immunology	Phosphoglucosmutase of Chlamydia muridarum under Anaerobic Condition
Simons, E.	CGS	Anatomy	Anatomy and Histology of the Macaroni and Adélie Penguins (<i>Eudyptes chrysolophus</i> , <i>Pygoscelis adeliae</i>)
Stephenson, E.	CGS	Anatomy	Does SMYD2 Regulate Metabolic Programming and Proteostasis in Skeletal Muscle Cells?
Swanson-Mungerson, M.	CGS	Microbiology & Immunology	Requirement for Toll-like Receptor 4 for the Induction of Pro-inflammatory Cytokine Production and Airway Induced Inflammation by <i>Brasilonema</i> Lipopolysaccharide
Wellensiek, B.	CGS	Biomedical Sciences	Utilizing Translation Enhancing Element 658 to Increase SARS-CoV-2 Spike Protein Production from Recombinant Vaccinia Viruses

Total CGS Intramural Funding: \$230,869

CHS-DG

Investigator/s	College	Department	Proposal Title
Chung, M.	CHS-DG	Physician Assistant	Wellbeing of Physician Assistant Students in the Midwestern University Downers Grove and Glendale Physician Assistant Programs
Evans, C.	CHS-DG	Physical Therapy	Doctor of Physical Therapy Students Knowledge and Confidence in Interpreting Orthopedic Medical Imaging: Comparison between Entry-Level Curricula
Hanke, T.	CHS-DG	Physical Therapy	Reliability and Validity of Foot strike Pattern using 2D Video Gait Analysis
Natvig, C.	CHS-DG	Behavioral Sciences	Exercise Prescriptions for Depression and Anxiety: a Needs Assessment for Local Mental Health Providers
Robinson, M.	CHS-DG	Occupational Therapy	Understanding the Lived Experience on Individuals with a Disability: An Interprofessional Education Event
Singh, B.	CHS-DG	Physical Therapy	To Determine Association Between Institutional Characteristics And Student's National Physical Therapy License Pass Rate

Total CHS-DG Intramural Funding: \$19,310

INTRAMURAL FUNDING

CHS-GD

Investigator/s	College	Department	Proposal Title
Ator, R.	CHS-GD	Physical Therapy	Physical Therapists' Role in Health Promotion as Perceived by the Patient: A Descriptive Survey
Frankland, L.	CHS-GD	Physical Therapy	Effectiveness of Physical Therapy Intervention in Pre-Clinical Dental Students
Jansen, K.	CHS-GD	Behavioral Sciences	Healthcare Experiences Among Individuals in Sex-related Occupations
MacNeil, B.	CHS-GD	Behavioral Sciences	Examining the Eating Disorder Voice in Adults with a History of the Illness
Morrow, M.	CHS-GD	Nurse Anesthesia	In Nurse Anesthesia Students, Does the Addition of an Animated Curriculum, Compared to Traditional Powerpoint Lectures, Improve Long-Term Student Retention of Information
O'Neal, S.	CHS-GD	Physical Therapy	A Community Pickleball Program

Total CHS-GD Intramural Funding: \$25,017

COP

Investigator/s	College	Department	Proposal Title
Briyal, S.	CPDG	Pharmaceutical Sciences	Exploring the Role of Endothelin B Receptors (ETBR) on Brain Regeneration and Function Restoration in Alzheimer's Disease
Harris, S.	CPG	Pharmacy Practice	Supply Grant
Joshi, M.	CPG	Pharmaceutical Sciences	Supply Grant
Olsen, M.	CPG	Pharmaceutical Sciences	A General Approach to Novel Mechanism-Based Inhibitors of Iron Dependent Dioxygenases
Olsen, M.	CPG	Pharmaceutical Sciences	Supply Grant
Pais, G.	CPDG	Pharmaceutical Sciences	Development and Validation of Two in vitro Cell Line Models to Study Drug-induced Kidney Injury: A Method to Realize the FDA's Vision of Animal Reduction in Drug Testing
Pais, G.	CPDG	Pharmaceutical Sciences	Supply Grant
Rhodes, N.J.	CPG	Pharmacy Practice	Development Assay Methods to Support Beta-lactam Population Pharmacokinetic Models to Achieve Dose Individualization in the ICU
Rhodes, N.J.	CPG	Pharmacy Practice	Supply Grant
Shiau, J.	CPG	Pharmacy Practice	Supply Grant
Veltri, C.	CPG	Pharmaceutical Sciences	Supply Grant
Volker, S.	CPG	Pharmaceutical Sciences	Evaluation of Eravacycline Activity Alone and in Combination Against High Inoculum Vancomycin-resistant Enterococci in an in vitro Pharmacodynamic Model

Total COP Intramural Funding: \$103,588

INTRAMURAL FUNDING

CVM

Investigator/s	College	Department	Proposal Title
Goe, A.	CVM	Veterinary Medicine	Pharmacokinetics and Safety Evaluation Following a Single Subcutaneous Dose of Robenaxoxib in Great Horned Owl (<i>Bubo virginianus</i>)
Lee, K.	CVM	Veterinary Medicine	Equine Odontoclastic Tooth Resorption and Hypercementosis
Okwumabua, O.	CVM	Veterinary Medicine	Expression, Purification and Determination of Antigenic Properties of Streptococcus Suis Strain 10-36905 Hemolysin III

Total CVM Intramural Funding: \$15,000

FACULTY SEED GRANT AWARDS

Investigator/s	Campus	Proposal Title
Veilleux, C.	Glendale	Grasping the Genetic Basis of Precision Touch in a Primate Model
Bodenstine, T.	Downers Grove	Identifying Gap Junction-dependent Functions of Polyploid Giant Cancer Cells in Breast Cancer
Tiwari, V., Swanson-Mungerson, M.	Downers Grove	Structure-function Analysis of NPC1-L1/ACE-2 Mediated SARS-CoV-2 Entry
Bussey, K.	Glendale	Investigating the Effects of Cortisol on Intratumor Heterogeneity in Triple-Negative Breast Cancer

Total Faculty Seed Grant Funding: \$40,000

IMPROVING HEALTH CARE DELIVERY AND REDUCING HEALTH CARE DISPARITIES IN UNDERSERVED MINORITY COMMUNITIES AWARD

Investigator/s	Campus	Proposal Title
O'Neal, S., Eikenberry, M., Wash, E., Christensen, S., de la Montaigne, A., Turner, T.	Glendale	Therapy Student Community Outreach Program for People Living with Parkinson's Disease

Total Health Care Delivery Research Funding: \$5,000

ONE HEALTH RESEARCH AWARDS

Investigator/s	Campus	Proposal Title
Rayhel, L., Jaffey, J.	Glendale	Efficacy of Twice-daily Nebulized Budesonide for the Treatment of Canine Chronic Bronchitis
Traka, M.	Downers Grove	Role of NAA Hydrolysis in CNS Myelination

Total One Health Research Funding: \$20,000

TOTAL MWU INTRAMURAL FUNDING AWARDED BY ALL COLLEGES DURING THIS REPORTING PERIOD: \$512,806

FY24 ANNUAL REPORT

UNIVERSITY-FUNDED RESEARCH SUPPORT POSITIONS BY CAMPUS*

MWU "HARD MONEY" RESEARCH SUPPORT POSITIONS		
CAMPUS	FTE	TOTAL COMPENSATION FOR REPORTING PERIOD
DOWNERS GROVE, ILLINOIS	26.9	\$1,677,696
GLENDALE, ARIZONA	32.1	\$1,734,447
TOTAL	59.0	\$3,412,143

*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 \$3,412,143

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. In FY2024, MWU spent \$995,085 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 FY2024, MWU waived \$308,960 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 FY2024, MWU paid out \$188,860 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.

FY24 ANNUAL REPORT

UNIVERSITY-FUNDED STUDENT SUPPORT POSITIONS BY CAMPUS

RESEARCH SUPPORT FOR STUDENTS IN DOWNERS GROVE, ILLINOIS		
ACTIVITY	NUMBER OF AWARDS	TOTAL FUNDING
RESEARCH POSTER PRINTING	244	\$6,289
TRAVEL TO PRESENT RESEARCH	43	\$20,849
FELLOWSHIPS#	52	\$277,500
TOTAL FUNDING IN SUPPORT OF STUDENT RESEARCH ACTIVITIES IN ILLINOIS		\$304,638

RESEARCH SUPPORT FOR STUDENTS IN GLENDALE, ARIZONA		
ACTIVITY	NUMBER OF AWARDS	TOTAL FUNDING
RESEARCH POSTER PRINTING	264	\$4,098
TRAVEL TO PRESENT RESEARCH	72	\$33,758
FELLOWSHIPS#	41	\$248,000
TOTAL FUNDING IN SUPPORT OF STUDENT RESEARCH ACTIVITIES IN ARIZONA		\$285,856

#Includes fellowships awarded in FY24, even though some payments are made in FY25.

**TOTAL FUNDING IN SUPPORT OF STUDENT RESEARCH
ACTIVITIES ACROSS BOTH CAMPUSES IS \$590,494**

Visit the ORSP website at

<https://www.midwestern.edu/research/office-research-sponsored-programs>

MWU FACULTY JOINT APPOINTMENTS

AZCOM

Layla Al-Nakkash
Karen Baab
Nancy Bae
Thomas Broderick
Kimberly Bussey
Gerald Call
David Jon Carroll
Samantha Day
Jeremy Ellermeier
Robert Fintelmann
Sunhindra Gadagkar

Aryeh Grossman
Wade Grow
Margaret Hall
Jose Hernandez
Thu Huynh
Sandra Inouye
Nafisa Jadavji
Garilyn Jentarra
Nathan Johnson
Douglas Jones

T. Bucky Jones
Sam Katzif
Jason Kaufman
Laszlo Kerecsen
Chongwoo Kim
Shaleen Korch
Lisa Kronstad
Kathryn Lawson
Andrew Lee
Kathryn Leyva

Leigha Lynch
Adebayo Molehin
Kathleen Muldoon
Christopher Olson
Matthew O'Neill
Pamela Potter
Anthony Peluso
Michael Quinlan
Parveen Ranjan
Ann Revill

Tobias Riede
Minsub Shim
Erin Simons
Heather Smith
Mark Swanson
Kathryn Townsend
Tony Tullot
Johana Vallejo-Elias
Carrie Veilleux
Mariah Kateland Zeigler

AZCOPT

Karen Baab
Nancy Bae
Aimee Beluch
Thomas Broderick
Gerald Call
Daniel Deligio

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Sarah Maxey
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Erin Simons
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Melissa Suckow
Mark Swanson
Kathryn Townsend
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AZCPM

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CCO

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Joanna Goral
Kyle Henderson

Sandra Inouye
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Kathy LePard
Alejandro Mayer
Paul McCulloch
Rafael Mejia-Alvarez

Rebecca Ng
Natalie Nguyen
Marsha Pierce
Maura Porta
Luigi Strizzi
Sinju Sundaresan

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Vaibhav Tiwari
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J. Wesley Cook
Michael Ebeid
Joshua Edwards
Michael Fay

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Joanna Goral
Eric Gorscak
William Hampton
Kurt Heinking
Kyle Henderson
Melanie Jessen
Lawrence Johnson
John Kasimos
Ji Eun Kim

Phillip Kopf
Richard Laddaga
Kathy LePard
Erin Leslie
Alejandro Mayer
Paul McCulloch
Rafael Mejia-Alvarez
William Moran
Kathleen O'Hagan
Marsha Louise Pierce

Balbina Plotkin
Maura Porta
Walter Prozialeck
Prasanth Puthanveetil
Terrence Ritzman
Cai Morgan Roberts
Alexander Rosenberg
Frank Serrechia
Ira Sigar
Erin Stephenson

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Medha Joshi

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Jung Keun Lee
Weidang Li
John Mitchell

Ogi Okwumabua
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Nathan Johnson
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Pamela Potter
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Ann Revill
Tobias Riede
Jose Rodriguez Sosa
Byron Russell
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Heather Smith
Julie Swartzendruber
Kathryn Townsend
Felicia Trembath

Johana Vallejo-Elias
Brian Wellensiek
Mariah Zeigler