

ANNUAL RESEARCH REPORT

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

OFFICE OF RESEARCH AND SPONSORED PROGRAMS

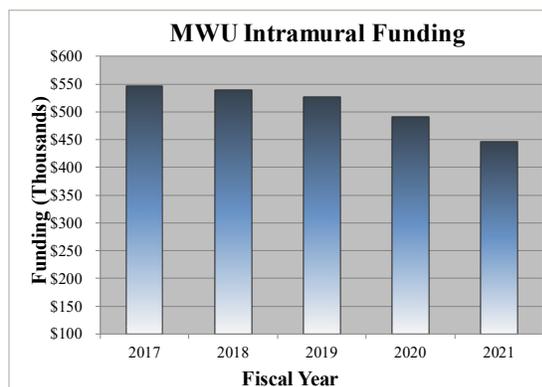
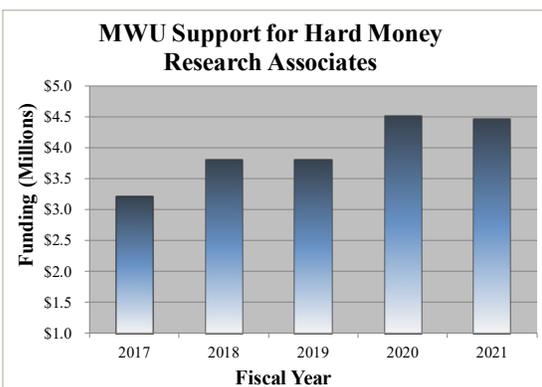
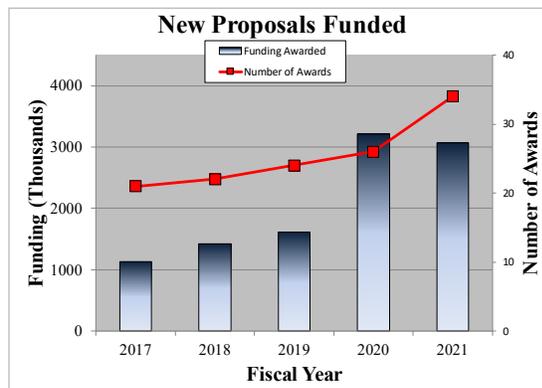
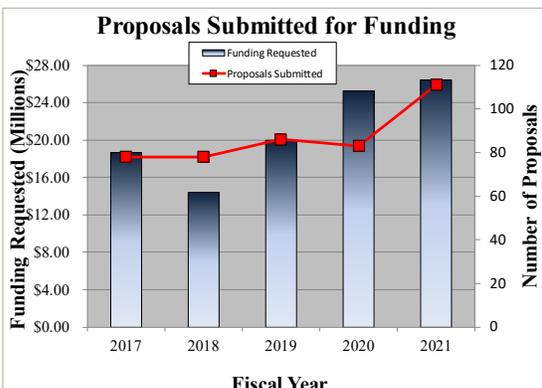
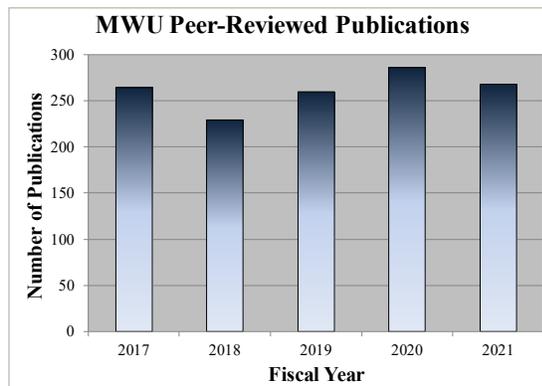
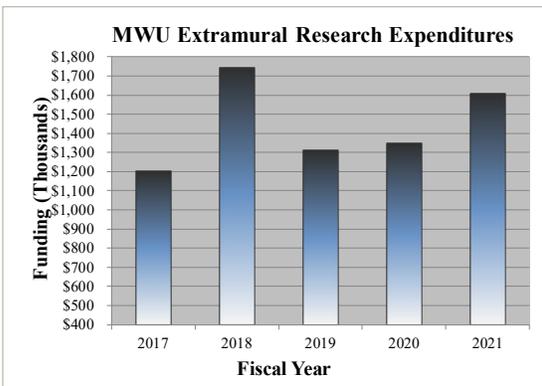
July 1, 2020 - June 30, 2021

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 strong. 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.



James M. Woods, PhD
Assistant Vice President of Research



IN THIS ISSUE:

- Fast Facts 2-3
- Submitted Proposals 4-11
- Active Awards 12-19
- Publications 20-36
- Intramural Awards 37-41
- Research Support Positions 42
- Capital Research Equipment 42
- Animal *Per Diem* Charges 42
- Recaptured Salary 42
- Support for Students 43
- Joint Appointments 44-45

Fast Research Facts 2020-2021

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 \$44,454 in such incentives for FY 2021;
- MWU provides “hard money” research technicians for faculty, including 62.7 Full Time Equivalents funded at \$4,466,363 for FY 2021;
- New faculty are provided start-up packages;
- Faculty can request capital research equipment through the university;
 - § MWU purchased \$913,728 in capital research equipment during FY 2021;
 - § 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 \$444,360 awarded in FY 2021;

Support for Student Research

- MWU makes a significant commitment to student research, demonstrated through the awarding of 115 fellowships at a total cost of \$552,350 for research stipends in FY 2021;
- MWU’s Research Days, held on each campus, had a total of 331 abstracts in 2021 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 \$27,673 for printing research posters through the ORSP in FY 2021;
- 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 2021 totaled \$1,603,231;
- MWU faculty have received more than 50 NIH grants, 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, HonorHealth, Leakey Foundation, Marfan Foundation, PhRMA Foundation, PetSmart Charities, Alzheimer’s Drug Discovery Foundation, National Assoc. of Chain Drug Stores, Pharmaceutical Research & Manufacturers of America Foundation, etc.;
- For-profit grants: Allegra Therapeutics, Boehringer Ingelheim, 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 105 proposals submitted in FY 2021 requesting \$26,421,591;
- MWU's ORSP offers intramural funds to all colleges and the following full time positions to support faculty research:
 - § A Grants Specialist on each campus 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 and a Biostatistician to assist with data management and statistical needs;
 - § An ORSP Associate Director and a Research Compliance Specialist 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 \$244,778 of waived charges in FY 2021;
- In FY 2021, MWU's ORSP offered \$10,402 to support a Research Seminar Series where faculty can bring in experts in their field (departments typically supplement the ORSP honorarium);

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 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 2014 MWU completed Cactus Wren, a new building with research facilities on our Glendale, Arizona campus:
 - § This building has 11,161 square feet of space dedicated to research;
 - § The research-related costs of the building totaled \$10,017,270;
- In 2011 MWU completed construction of a new Science Hall on our Downers Grove, Illinois 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 has maintained full AAALAC accreditation since opening;

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 SUBMITTED EXTRAMURAL PROPOSALS

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
*Kronstad, L.M. (CGS) & Lopez, B. (CVM)	CGS, CVM	Microbiology & Immunology, Veterinary Medicine	Bridging Viral Genetics and Host Immunity to Aid in Rational Influenza Vaccine Design	6/24/2021	\$450,000	NIH-R15 (REAP)	4/1/2022
Struthers, J. (CVM), Olson, C. (CGS) & Tonelli-Raylove, A. (CVM '23)	CVM, CGS	Veterinary Medicine, Physiology	The Pathology and Incidence of Building-caused Bird Mortality on Midwestern University's Glendale Campus	8/31/2020	\$1,000	Arizona Field Ornithologists - Gale Monson Grant	3/22/21
Struthers, J. (CVM), Olson, C. (CGS) & Tonelli-Raylove, A. (CVM '23)	CVM, CGS	Veterinary Medicine, Physiology	The Pathology and Incidence of Building-caused Bird Mortality on Midwestern University's Glendale Campus	1/9/2021	\$2,229	American Ornithological Society	3/22/21

Total of Multidisciplinary Submitted Extramural Proposals: \$453,229

ARIZONA COLLEGE OF OPTOMETRY (AZCOPT): SUBMITTED EXTRAMURAL PROPOSALS

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
*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)	2/26/2021	\$17,400	National Eye Institute Cooperative Agreement with JAEB Center for Health Resarch	2/26/2021

Total of AZCOPT Submitted Extramural Proposals: \$17,400

CHICAGO COLLEGE OF OPTOMETRY (CCO): SUBMITTED EXTRAMURAL PROPOSALS

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Chakraborty, A.	CCO	Optometry	Enhancing Activities of Daily Living in Individuals with Central Vision Loss Using Transcranial Direct Current	12/21/2020	\$225,000	National Institute on Disability, Independent Living, and Rehabilitation Research (HHS) Subcontract from Envision Research Institute	9/1/2021
Chakraborty, A.	CCO	Optometry	Visual Rehabilitation in Individuals with Central Vision Loss Using Transcranial Direct Current Stimulation	2/5/2021	\$225,000	NIH-R01 Subcontract from Envision Research Institute	10/1/2021
De Gracia, P.	CCO	Optometry	Role of Fixational Eye Movements in Myopia Progression	8/8/2020	\$399,821	CooperVision	11/1/2020
*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)	4/13/2021	\$23,350	National Eye Institute Cooperative Agreement with JAEB Center for Health Resarch	4/13/2021

Total of CCO Submitted Extramural Proposals: \$873,171

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

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
*Mitchell, J. (Fox, L., CDMI '24)	CDMA	Dental Medicine	Implant Uncovering via Carbon Dioxide Laser and the Potential Thermal Rise of Biomaterials	4/2/2021	\$2,100	American Association of Dental Research	6/1/2021
*Mitchell, J.	CDMA	Dental Medicine	Comparison Wear Study of Plaque Buster Toothbrush with Flossing Bristles	4/8/2021	\$575	TiFinity Oral Care, LLC	6/1/2021
*Mitchell, J.	CDMA	Dental Medicine	Wear Testing of Novel Denture Tooth Materials	4/16/2021	\$8,625	Myerson, LLC	5/10/2021

Total of CDMA Submitted Extramural Proposals: \$11,300

*An asterisk denotes new material added over the most recent quarter; material in this report is cumulative based on MWU's fiscal year (July 1st - June 30th).

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

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
*Cuevas-Nunez, M. (Kim, A.S., CDMI '24)	CDMI	Dental Medicine	The Effects of Photobiomodulation on Oral Squamous Cell Carcinoma Cell Proliferation	4/2/2021	\$2,100	American Association of Dental Research	6/1/2021
*Pulido, T. (McDermott, S., CDMI '23)	CDMI	Dental Medicine	Analysis of the Color Stability and Surface Texture of Universal Shade Composites	4/2/2021	\$2,100	American Association of Dental Research	6/1/2021
*Ramos, M. (Hackenberger, R., CDMI '24)	CDMI	Dental Medicine	Effects of Restorative Membranes on Rat Calvarium Mesenchymal Stem Cell Differentiation and Growth	4/2/2021	\$2,100	American Association of Dental Research	6/1/2021
Rocha de Oliveira Carrilho, M.	CDMI	Dental Medicine	D-BioFounDeR-Dentin Biolink as a Foundation for Dental Rehabilitation	12/1/2020	\$31,600	American Association of University Women	7/1/2021
*Rocha de Oliveira Carrilho, M. (Aiello, S., CDMI '24)	CDMI	Dental Medicine	Biologic Significance of Collagen Cross-linking in Oral Squamous Cell Carcinoma	4/2/2021	\$2,100	American Association of Dental Research	6/1/2021
*Williams, L. (Senan, S., CDMI '23)	CDMI	Dental Medicine	The Role of Nodal in Human Oral Dysplasia	4/2/2021	\$2,100	American Association of Dental Research	6/1/2021

Total of CDMI Submitted Extramural Proposals: \$42,100

CHICAGO COLLEGE OF PHARMACY (CCP): SUBMITTED EXTRAMURAL PROPOSALS

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Merker, A.	CCP	Pharmacy Practice	Midwest Integration of the National HIV Curriculum	9/17/2020	\$10,000	HRSA, HIV/AIDS Bureau, Office of Training & Capacity Development	8/27/2020
*Ranjan, A.	CCP	Pharmaceutical Sciences	Study of the Effects of Endothelin B Receptors (ETBR) Agonism on Differentiation of Neural Stem/Progenitor Cells and Mitochondrial Activities in Adult Brains after Ischemic Stroke	6/25/2021	\$446,466	NIH-R15 (REAP)	4/1/2022
Rhodes, N.J.	CCP	Pharmacy Practice	Evaluating Rates of Target Attainment for Omadacycline Against Gram-positive and Gram-negative Osteomyelitis Using a Physiologically-based Pharmacokinetic (PBPK) Model	3/23/2021	\$37,950	Paratek Pharmaceuticals	6/1/2021
Rhodes, N.J.	CCP	Pharmacy Practice	Validation of a Clinical Decision Rule to Identify Patients with Community-acquired Pneumonia at High Risk for Subsequent Development of <i>C. difficile</i> Infection	3/23/2021	\$55,200	Paratek Pharmaceuticals	6/1/2021
Scheetz, M.	CCP	Pharmacy Practice	Assessment of MODS and Personalized Exposure of Antibiotics (AMPLE)	11/5/2020	\$916,914	NIH-R01 Subcontract from the Children's Hospital of Philadelphia	7/1/2021
Scheetz, M.	CCP	Pharmacy Practice	Reducing Vancomycin-associated Nephrotoxicity: New Approaches to an Old Problem	2/5/2021	\$534,126	AHRQ-R01 Subcontract from the University of Michigan	9/1/2021
*Scheetz, M.	CCP	Pharmacy Practice	Reducing Vancomycin-associated Nephrotoxicity: New Approaches to an Old Problem	6/5/2021	\$422,114	DHHS AHRQ Subcontract from the University of Michigan Medical School	4/1/2022
*Tran, T.	CCP	Pharmacy Practice	Illinois SPF-Rx (Strategic Prevention Framework for Prescription Drugs)	4/30/2021	\$1,374,677	DHHS SAMHSA Subcontract from the Illinois Department of Human Services	9/30/2021

Total of CCP Submitted Extramural Proposals: \$3,797,447

COLLEGE OF GRADUATE STUDIES (CGS): SUBMITTED EXTRAMURAL PROPOSALS

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Al-Nakkash, L.	CGS	Physiology	Role of Genistein to Influence Growth and Intestinal Function in Cystic Fibrosis Mice	2/24/2021	\$435,300	NIH-R15 (REAP)	12/1/2021
*Al-Nakkash, L., Broderick, T. & Shim, M.	CGS	Physiology, Biochemistry & Molecular Genetics	Reversal of Western Diet-induced Alzheimer's-like Pathology with Genistein and/or Exercise	5/14/2021	\$27,000	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2021
*Bae, N. & Swanson, M.	CGS	Biochemistry & Molecular Genetics	Regulation of Neuronal Gene Expression by the Telomere Protection Protein RAP1 and the Demethylase TET3	5/14/2021	\$18,000	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2021
Bodenstine, T.	CGS	Biochemistry & Molecular Genetics	Connecting Cancer Cell Metabolism to Gap Junctional Intercellular Communication and Invasion	2/25/2021	\$449,554	NIH-R15 (REAP)	9/1/2021
*Broderick, T.	CGS	Physiology	Mechanistic Role of Vascular Dysfunction in TBI-mediated Cognitive Dysfunction	3/15/2021	\$28,760	Phoenix VA Health Care System	4/15/2021
Bussey, K.	CGS	Precision Medicine	Essential Genes Underlying the Transition to Multicellularity in Animals	12/1/2020	\$34,925	American Association of University Women	7/1/2021
*Bussey, K.	CGS	Precision Medicine	Establishing the Evolutionary Context of Essential Genes	4/16/2021	\$179,964	NIH Administrative Supplement Subcontract from Arizona State University	8/1/2021
Carroll, D.	CGS	Biochemistry & Molecular Genetics	Signal Transduction During Fertilization	10/23/2020	\$442,500	NIH-R15 (REAP)	7/1/2021
Ebeid, M.	CGS	Anatomy	PRDM16 Role in Mouse Cochlear Development and Function	2/26/2021	\$487,500	NIH-R21	12/1/2021
*Ellermeier, J.	CGS	Microbiology & Immunology	Regulation of <i>tatABC</i> in Response to Periplasmic Stress in <i>Salmonella enterica</i> serovar Typhimurium	6/24/2021	\$449,234	NIH-R15 (REAP)	4/1/2022
Esfandiarei, M.	CGS	Biomedical Sciences	Understanding the Mechanisms Underlying Vascular Dysfunction in the Mouse Model of Neurofibromatosis Type 1: New Approaches for Prevention and Therapy	7/9/2020	\$785,864	Department of Defense	7/1/2021
Hernandez, J.	CGS	Biochemistry & Molecular Genetics	Structural Elucidation of a Small Molecule Chelator to Combat Bacterial Infections in Dogs	3/10/2021	\$10,800	Morris Animal Foundation	8/1/2021
Hull, E.	CGS	Biomedical Sciences	The Influence of Iron Regulatory Proteins on Ferroptosis	2/25/2021	\$45,185	NIH-R15 Subcontract from Oklahoma State University	9/1/2021
Huynh, T.	CGS	Biochemistry & Molecular Genetics	Accelerated Postsynaptic Spine Formation Enhances Extinction Learning in a Humanized Fatty Acid Amide Hydrolase (FAAH) Knock-in Mouse	12/1/2020	\$24,666	American Association of University Women	7/1/2021
*Huynh, T.	CGS	Biochemistry & Molecular Genetics	Collaborative Research: Steroid Mechanisms on Prefrontal Cortex and Hippocampal Behaviors	6/17/2021	\$330,757	National Science Foundation	5/1/2022
Jadavji, N.	CGS	Biomedical Sciences	CAREER: The Long-term Impact of Maternal Dietary Deficiencies in One-Carbon Metabolism on Hippocampal Function in Adult and Old Age Offspring	8/11/2020	\$533,418	National Science Foundation	2/1/2021
Jadavji, N.	CGS	Biomedical Sciences	Impact of Maternal Nutrition on Offspring Hippocampal Function	9/15/2020	\$75,000	Alfred P. Sloan Foundation	9/15/2020
Jadavji, N.	CGS	Biomedical Sciences	The Impact of One-Carbon Metabolism Supplementation on Cognitive Impairment and Pathology in a Paraquat Mouse Model of Parkinson's Disease	9/16/2020	\$251,249	Department of Defense	3/1/2021

CGS: SUBMITTED EXTRAMURAL PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Jadavji, N.	CGS	Biomedical Sciences	Ben Barres Spotlight Award	9/28/2020	\$6,000	eLife	10/16/2020
Jadavji, N.	CGS	Biomedical Sciences	The Impact of One-Carbon Metabolism Supplementation on Neuroplasticity Using an <i>in vivo</i> Model of Stroke	12/1/2020	\$24,738	American Association of University Women	12/1/2020
*Jadavji, N.	CGS	Biomedical Sciences	Supplement: Identification of Developmental Factors Involved in Ischemic Stroke Outcomes in Adulthood and Old Age	6/1/2021	\$31,268	American Heart Association	7/1/2021
*Jadavji, N.	CGS	Biomedical Sciences	Identifying the Role of Maternal and Postnatal Dietary Deficiencies in One-Carbon Metabolism on Vasculature and Outcome in Adult, Middle- and Old-Age Male and Female Offspring After Ischemic Stroke	6/25/2021	\$450,000	NIH-R15 (REAP)	4/1/2022
Jentarra, G.	CGS	Precision Medicine	Targeting Fatty Acid Metabolism in Alzheimer's Disease: A Special Interest in Lauric Acid	7/9/2020	\$98,252	NIH-R21 Subcontract from Arizona State University	4/1/2021
*Jentarra, G., Jones, T.B. & Gonzalez, F.	CGS	Precision Medicine, Anatomy, Microbiology & Immunology	Exploring Intestinal Microbiota Dysbiosis in Transgenic Alzheimer's Disease Mouse Models	5/14/2021	\$60,000	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2021
Kim, C.	CGS	Biochemistry & Molecular Genetics	Molecular Basis of the Selective Assembly of Functionally Distinct PRC1s	2/25/2021	\$450,000	NIH-R15 (REAP)	9/1/2021
Lee, A.	CGS	Anatomy	Growing Gulls as a New Model for Understanding the Effect of Delayed Locomotor Development on Limb-Bone Microstructure	2/1/2021	\$5,000	The Waterbird Society	4/1/2021
Martinez-Guryn, K.	CGS	Biomedical Sciences	The Role of Gut Microbiota	10/16/2020	\$389,305	NIH-R21 with a Subcontract (\$137,000) to University of Tennessee Health Science Center	7/1/2021
Martinez-Guryn, K.	CGS	Biomedical Sciences	Emodin-microbiome Interactions Protect Against Cardiac Dysfunction	2/5/2021	\$968,346	NIH-R01 Subcontract from the University of Nevada-Reno	9/1/2021
*Martinez-Guryn, K.	CGS	Biomedical Sciences	Emodin Protects Against Cardiac Dysfunction Through the Microbiome	6/10/2021	\$348,800	USDA Subcontract from the University of Nevada, Reno	1/1/2022
Mejía-Alvarez, R.	CGS	Physiology	IP3Receptor Type 2 Dysfunction and its Pro-arrhythmic Actions	7/5/2020	\$585,849	NIH-R01 Subcontract from Rush University	4/1/2021
Mejía-Alvarez, R.	CGS	Physiology	Arrhythmogenic Potential of Type-II IP3R Human Mutations	2/16/2021	\$100,018	NIH-R21 Subcontract from Rush University	9/1/2021
Olson, C.	CGS	Physiology	Supplement: Vocalizing in a Complex and Crowded Forest: An Investigation of a Unique Hummingbird Solution	8/31/2020	\$3,501	National Geographic Society	9/1/2020
Puthanveetil, P.	CGS	Pharmacology	Glp1 Receptor Activation as a Protective Signaling in Cusing's Syndrom Model	1/26/2021	\$2,055,037	NIH-R01	9/1/2021
*Puthanveetil, P.	CGS	Pharmacology	CoQ10 Supplementation as a Protective Strategy Against Binge Drinking-induced System Metabolic Dysfunction	5/26/2021	\$2,364,202	NIH-R01	12/21/2021
Reville, A.	CGS	Physiology	NIH Program to Increase Diversity Among Individuals Engaged in Health-related Research (PRIDE) - Advanced Respiratory Research for Equity (AiRE)	11/30/2020	\$23,000	NIH PRIDE AiRE	7/1/2021
Riede, T.	CGS	Physiology	The Influence of Vocal Loading Upon the Healing of Experimental Vocal Fold Injury	2/16/2021	\$404,500	NIH-R21	9/1/2021

CGS: SUBMITTED EXTRAMURAL PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Samanta, D.	CGS	Microbiology & Immunology	Elucidating the Molecular Mechanisms Behind <i>Coxiella burnetii</i> Inhibition of Host Endosomal Maturation	2/16/2021	\$229,900	American Heart Association	7/1/2021
*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	5/15/2021	\$21,260	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2021
Sigar, I.	CGS	Microbiology & Immunology	Oxygen Regulation of Chlamydial Replication, Transmission, and Associate Proteomics	10/16/2020	\$150,000	NIH-R03	7/1/2021
Smith, H.	CGS	Anatomy	Improving the Diagnosis of Luxations, Upper Respiratory Tract Infections, and Vascular Deficiencies in Captive Tortoises Using CT Scans and Radiography	11/2/2020	\$75,000	Morris Animal Foundation	5/1/2021
Strizzi, L.	CGS	Pathology	Novel Method for Targeting Wnt Signaling to Treat Aggressive Canine Melanoma	8/19/2020	\$14,977	American Kennel Club, Canine Health Foundation	2/1/2021
Strizzi, L.	CGS	Pathology	Nodal and Cripto-1 as Novel Therapeutic Targets in Human Oral Squamous Cell Carcinoma	8/31/2020	\$103,063	Elsa U. Pardee Foundation	2/1/2021
Strizzi, L.	CGS	Pathology	Identifying Novel Therapeutic Targets in Drug Resistant Anoxic Melanoma Cells	10/25/2020	\$449,827	NIH-R15 (REAP)	7/1/2021
*Swanson, M. & Bae, N.	CGS	Biochemistry & Molecular Genetics	A Genome-wide Screen for Human Proteins that Affect Amyloid Beta Peptide Production by Gamma Secretase Using a Yeast Genetic System	5/14/2021	\$20,669	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2021
*Swanson, M. & Bae, N.	CGS	Biochemistry & Molecular Genetics	Studies of the Effects of the Telomere Protection Protein RAP1 and the Epsilon Isoform of Glial Fibrillary Acidic Protein on Gamma-Secretase Activity	6/23/2021	\$420,500	NIH-R15 (REAP)	4/1/2022
Swartzendruber, J.	CGS	Microbiology & Immunology	Gut-Lung Axis in Prevention of Asthma	12/1/2020	\$30,000	American Association of University Women	7/1/2021
Tiwari, V.	CGS	Microbiology & Immunology	Investigating the Mechanistic Role of Heparan Sulfate and Evaluating Heparan Sulfate as a Therapy for COVID-19 in Diabetes	8/14/2020	\$74,493	NIH-R01 Subcontract from the University of Utah	10/1/2020
Tiwari, V.	CGS	Microbiology & Immunology	Structure-Function Analysis of Heparan Sulfate to Understand SARS-CoV-2 Entry and Cell-to-Cell Spread	10/25/2020	\$466,435	NIH-R15 (REAP) with a Subcontract (\$116,438) to Virginia Commonwealth University	7/1/2021
*Tiwari, V.	CGS	Microbiology & Immunology	Structure-Function Analysis of Heparin Sulfate to Understand SARS-CoV-2 Entry and Cell-to-Cell Spread	6/25/2021	\$466,440	NIH-R15 (REAP) with a Subcontract (\$91,440) to Virginia Commonwealth University	4/1/2022
*Tiwari, V. & Swanson-Mungerson, M.	CGS	Microbiology & Immunology	Molecular Diversity of Heparan Sulfate in the Zoonotic Transition of Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2)	6/16/2021	\$150,000	NIH-R03	4/1/2022
*Traka, M.	CGS	Anatomy	Mechanisms of N-acetylaspartate Function in the CNS	6/25/2021	\$450,000	NIH-R15 (REAP)	4/1/2022
Veilleux, C.	CGS	Anatomy	Grasping our Evolutionary Origins: Unraveling the Anatomical and Molecular Adaptations of Primate Touch	1/26/2021	\$745,790	National Science Foundation with a Subcontract (\$143,884) to the University of Calgary	12/1/2021
Vélez-Cruz, R.	CGS	Biochemistry	The Role of SWI/SNF Chromatin Remodelers in Homologous Recombination and Genome Stability	2/25/2021	\$448,875	NIH-R15 (REAP)	9/1/2021

Total of CGS Submitted Extramural Proposals: \$17,294,721

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

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Helminski, J.	CHS-DG	Physical Therapy	Vestibular Function and Balance in People with Diabetes Mellitus	8/21/2020	\$22,912	Department of Veterans Affairs, Office of Research & Development, Small Projects in Rehabilitation Research (SPIRE)	5/1/2021

Total of CHS-DG Submitted Extramural Proposals: \$22,912

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

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Eikenberry, M.	CHS-GD	Physical Therapy	A Robotic Approach to Quantify Asymmetry of Bilateral Ankle Mechanics During Standing Balance Post-Stroke	3/15/2021	\$13,434	NIH-R21 Subcontract from Arizona State University	9/1/2022
LaCroix, A.	CHS-GD	Speech-Language Pathology	The Effects of Music Listening on Auditory Attention in Persons with Aphasia	2/23/2021	\$20,000	GRAMMY Museum	9/1/2021
Ratiu, I.	CHS-GD	Speech-Language Pathology	The Impact of Mild Traumatic Brain Injuries and Naturalistic Auditory Distraction on Reading: An Eye-tracking Investigation	10/22/2020	\$428,076	NIH-R15 (REAP) with Subcontracts to New Mexico State University (\$94,981) and Arizona State University (\$97,097)	5/1/2021
*Turner, T. & Anderson, S.	CHS-GD	Occupational Therapy	Music and Dementia: A Manualized Intervention Incorporating Music in an Occupational Therapy Intervention for Persons Living with Dementia	5/14/2021	\$3,700	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2021

Total of CHS-GD Submitted Extramural Proposals: \$465,210

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

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
*Goodlet, K.	CPG	Pharmacy Practice	A Retrospective Matched Cohort Study to Evaluate the Efficacy and Safety of Letermovir Compared to Valganciclovir for the Prevention of Human Cytomegalovirus Disease in Adult Lung Transplant Recipients	4/1/2021	\$25,644	Merck Subcontract from St. Joseph's Hospital and Medical Center	6/1/2021
*Goodlet, K.	CPG	Pharmacy Practice	A Multicenter, Retrospective, Quasi-experimental, Post-intervention Design Study to Describe Provider Decision-making in Response to an Automated, Electronic Antibiotic Time-Out Alert After 48 Hours of Antibiotic Therapy Across a U.S. Health System	4/12/2021	\$11,252	Merck Subcontract from St. Joseph's Hospital and Medical Center	8/1/2021
*Huang, V.	CPG	Pharmacy Practice	Development of a Weighted-incidence Syndromic Antibiogram for Inpatient Antimicrobial Stewardship Among Community-acquired Infections in a Community Setting	5/16/2021	\$30,600	Merck	6/1/2021
Huang, V. & Okegbile, S. (CPG '22)	CPG	Pharmacy Practice	Evaluate the <i>in vitro</i> Activity of Eravacycline Alone and in Combination Against Clinical <i>Acinetobacter baumannii</i> Isolates	3/8/2021	\$5,000	American Foundation for Pharmaceutical Education	6/1/2021
*Joshi, M.	CPG	Pharmaceutical Sciences	Overcoming Fetal and Maternal Vancomycin-induced Kidney Injury: A Rat Model to Understand and a "Nano" Formulation to Circumvent	6/24/2021	\$450,000	NIH-R15 (REAP)	4/1/2022
Yao, M.	CPG	Pharmaceutical Sciences	Soluble Decoy CD47 Receptor as Novel Therapeutic Approach for Mitigation of Thrombospondin 1-induced Vascular Pathologies	10/15/2020	\$419,271	NIH-R21	5/1/2021

(CPG): SUBMITTED EXTRAMURAL PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Yao, M.	CPG	Pharmaceutical Sciences	Novel Therapeutic Strategy Targeting Thrombospondin 1-mediated Instant and Delayed Ischemia in Aneurysmal Suarachnoid Hemorrhage via Pharmaceutical Formulated Recombinant Human CD47 Peptide	3/8/2021	\$24,789	The Aneurysm and AVM Foundation	7/1/2021

Total of CPG Submitted Extramural Proposals: \$966,556

COLLEGE OF VETERINARY MEDICINE (CVM): SUBMITTED EXTRAMURAL PROPOSALS

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Brosnahan, M.	CVM	Veterinary Medicine	Investigation of Selected Surface Molecules on Eosinophils Isolated from the Brochoalveolar Lavage Fluid and Peripheral Blood of Horses with Asthma	7/8/2020	\$10,800	Morris Animal Foundation	12/1/2020
Lopez, B.	CVM	Veterinary Medicine	Host-Pathogen Interaction During Cryptosporidiosis - A Model for Disease Pathogenesis and Discovery of Effective Therapeutics	12/1/2020	\$34,900	American Association of University Women	7/1/2021
*Lopez, B.	CVM	Veterinary Medicine	Advanced Training in Food Animal Practice - Enhanced Education in Rural Practice, Food Safety and Public Health	4/16/2021	\$169,774	USDA National Institute of Food and Agriculture	10/1/2021
*Lopez, B.	CVM	Veterinary Medicine	Evaluating the Influence of an Immunomodulator on the Health Productivity of High Risk Stocker Calves	5/14/2021	\$118,940	USDA National Institute of Food and Agriculture Subcontract from Texas A&M University	3/1/2022
Murthy, A.	CVM	Veterinary Medicine	Animal Health and Disease Research	8/17/2020	\$22,902	USDA National Institute of Food and Agriculture	10/1/2020
Murthy, A.	CVM	Veterinary Medicine	Synthesis of Potential Activators of Cylindrical Proteases as Novel Anti-Chlamydia Treatments	10/5/2020	\$322,538	NIH-R01 Subaward from the University of Nebraska Medical Center	7/1/2021
Murthy, A.	CVM	Veterinary Medicine	Animal Health and Disease Research	3/25/2021	\$13,728	USDA National Institute of Food and Agriculture	10/1/2021
Murthy, A. & Wycislo, K.	CVM	Veterinary Medicine	Boehringer Ingelheim Veterinary Scholars Program	10/28/2020	\$20,000	Boehringer Ingelheim	5/31/2021

Total of CVM Submitted Extramural Proposals: \$713,582

INSTITUTE FOR HEALTHCARE INNOVATION (IHI): SUBMITTED EXTRAMURAL PROPOSALS

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Lipinski, C.	IHI	Institute for Healthcare Innovation	COVID Interventional Drug Study	7/1/2020	~200,000	Pharmaceutical Company	11/1/2020
Lipinski, C.	IHI	Institute for Healthcare Innovation	COVID Interventional Drug Study	7/1/2020	~120,000	Pharmaceutical Company	11/1/2020
Lipinski, C.	IHI	Institute for Healthcare Innovation	COVID Interventional Drug Study	7/1/2020	~150,000	Pharmaceutical Company	11/1/2020
Woods, C. & VanDenBerg, C.	IHI	Institute for Healthcare Innovation	Multiplexed In-solution Serological Tests for SARS-CoV-2, Human Coronavirus and Other Respiratory Pathogens	7/16/2020	\$703,771	Leidos Biomedical Research, LLC (NIH) Subcontract from Arizona State University	10/1/2020
Woods, C.	IHI	Institute for Healthcare Innovation	Pilot Project for Surveillance and Investigation of SARS-CoV-2 in Animals	8/21/2020	\$7,876	Centers for Disease Control Subcontract from Arizona Department of Health Services	9/1/2020

(IHI): SUBMITTED EXTRAMURAL PROPOSALS (Continued)

Investigator/s	College	Department	Proposal Title	Submitted	Total	Agency	Start Date
Woods, C.	IHI	Institute for Healthcare Innovation	Development, Safety & Efficacy of a Novel Multiple Cytokine Inhibitor	9/5/2020	\$562,316	NIH-STTR Subcontract from Botanisol, LLC	4/1/2021
Woods, C.	IHI	Institute for Healthcare Innovation	Clinical Efficacy of a Supplement in Cats with Chronic Renal Disease	12/1/2020	\$20,000	Pharmaceutical Company	3/1/2021

Total of IHI Submitted Extramural Proposals: ~\$1,763,963

**MWU SUBMITTED 105 EXTRAMURAL PROPOSALS FROM ALL COLLEGES
THROUGH Q4 OF FISCAL YEAR 2021 TOTALING \$26,421,591**

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Eckman, D. (CGS), Jones, C. (CGS), Jones, T.B. (CGS), Vallejo-Elias, J. (CGS), Virden, T. (CHS-GD) & Powell, J. (CHS-GD)	CGS & CHS-GD	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	3/31/2022
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: \$375,000

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
Finch, C. & Nydam, R.	AZCOM	Clinical Education & Administration	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	6/30/2021

Total of AZCOM Active Extramurally-funded Research Awards: \$217,456

**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.	AZCOPT	Optometry	Measurements of Microsaccades and Fixational Eye Movements in Acquired Brain Injury Patients Pre- and Post-Vision Therapy Utilizing the Tracking Scanner Laser	\$3,500	College of Optometrists in Vision Development	7/2/2019	6/30/2021
Feis, A.	AZCOPT	Optometry	A Randomized Clinical Trial of Overminus Spectacle Therapy for Intermittent Exotropia (IXT5)	\$14,625	National Eye Institute Cooperative Agreement with JAEB Center for Health Research, Inc.	6/12/2017	12/31/2021
Feis, A.	AZCOPT	Optometry	A Pilot Randomized Clinical Trial of Base - In Prism Spectacles for Intermittent Exotropia (IXT6)	\$7,313	National Eye Institute Cooperative Agreement with JAEB Center for Health Research, Inc.	10/1/2019	12/31/2020
*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	12/31/2022
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
Vasudevan, B.	AZCOPT	Optometry	Effect of LipiFlow on Ocular Surface Disease Management with Cataract Surgery	\$273,000	Johnson & Johnson Surgical Services	2/1/2020	1/31/2021
Yeh, F., Kenworthy, P., Addy, L., Feis, A., Liao, G. & Vasudevan, B.	AZCOPT	Optometry	Clinical Evaluation of a Daily Wear Frequent Replacement Silicone Hydrogel Lens Trial	\$53,000	Alcon, Inc.	3/1/2020	8/31/2020

Total of AZCOPT Active Extramurally-funded Research Awards: \$681,838

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	12/31/2022
*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	12/31/2022
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	1/31/2024

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

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	Administration	Mentor and Train PCCM and NPM Fellows for Scholarly Activity	\$170,000	Advocate Health and Hospitals Corporation	1/1/2020	12/31/2021
Merker, A.	CCP	Pharmacy Practice	Midwest Integration of the National HIV Curriculum - Year 2	\$10,000	HRSA, HIV/AIDS Bureau, Subcontract from the University of Illinois Chicago	9/1/2019	8/31/2020
*Merker, A.	CCP	Pharmacy Practice	Midwest Integration of the National HIV Curriculum - Year 3	\$10,000	HRSA, HIV/AIDS Bureau, Subcontract from the University of Illinois Chicago	9/1/2020	8/31/2021
Rhodes, N.J.	CCP	Pharmacy Practice	Effect of Omadacycline Alone and in Combination with Meropenem Against Clinical <i>Acinetobacter baumannii</i> Isolates	\$2,829	Paratek Pharmaceuticals Subcontract from Albany College of Pharmacy and Health Sciences	1/8/2020	1/7/2021
Rhodes, N.J.	CCP	Pharmacy Practice	Development of a Clinical Decision Algorithm for Adults Hospitalized with Pneumonia	\$9,999	American Association of Colleges of Pharmacy	3/1/2020	8/31/2021
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	10/31/2020
Scheetz, M.	CCP	Pharmacy Practice	Nanoparticle-Polymyxin B Conjugates for Treating Infections in CF Patients	\$70,403	Cystic Fibrosis Foundation Subcontract from Northwestern University	11/1/2017	10/31/2021
Scheetz, M.	CCP	Pharmacy Practice	Defining the Blood Brain Barrier Transit of Cefepime/AAI101 in a Sprague Dawley Rat Model	\$15,075	Allegra Therapeutics	8/31/2018	8/20/2020
Scheetz, M.	CCP	Pharmacy Practice	Evaluation of Lipid Nanoparticles of Potent Antibiotics for Reversal of Drug Resistance of Superbug Infections	\$15,000	Wayne State University	8/21/2019	8/20/2021
Scheetz, M.	CCP	Pharmacy Practice	Quantifying Renal Injury Among the Most Commonly Used Antibiotic Combinations	\$412,500	NIH-R21	1/16/2020	12/31/2021
Scheetz, M.	CCP	Pharmacy Practice	Patient-oriented Research on <i>Pseudomonas aeruginosa</i>	\$39,760	NIH-K24 Subcontract from Northwestern University	2/22/2020	1/31/2025
Scheetz, M.	CCP	Pharmacy Practice	Evaluation of Vancomycin-Arginine	\$93,250	SuperTrans Medical, LTD	9/3/2020	9/2/2021

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Scheetz, M.	CCP	Pharmacy Practice	Nevakar Compound Analysis	\$140,734	Nevakar	9/9/2020	Open
*Scheetz, M.	CCP	Pharmacy Practice	Evaluation of Vancomycin-Arginine	\$32,188	SuperTrans Medical, Ltd.	5/17/2021	5/16/2022
Wang, S.	CCP	Pharmacy Practice	Assessment of Patients' Perceptions on Antimicrobial Stewardship and Attitudes Towards Board Certified Clinical Pharmacists Within the Movement to Reduce Antimicrobial Resistance	\$5,000	Board of Pharmacy Specialties	11/1/2019	10/30/2020

Total of CCP Active Extramurally-funded Research Awards: \$1,059,138

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Berrigan, K. & Mitchell, J.	CDMA	Dental Medicine	Force Decay in Orthodontic Elastomers: Effect of Color and Time	\$2,500 (Value of)	American Orthodontics	8/1/2020	6/30/2022
Berrigan, K. & Mitchell, J.	CDMA	Dental Medicine	Use of Cervitech Plus Varnish to Prevent White Spot Lesions in Patients Undergoing Orthodontic Treatment	\$2,500 (Value of)	Ivoclar Vivadent	7/1/2020	6/30/2023
Mitchell, J.	CDMA	Dental Medicine	The Effects of a One-step Oxidative Etching Process on Cell Differentiation, Proliferation and Attachment Compared to Conventional Micro- and Nano-scale Topography of Titanium Implants	\$5,000 (Value of)	Institut Straumann AG	12/14/2018	8/31/2021
Mitchell, J.	CDMA	Dental Medicine	Evaluation of a Novel Three-second Curing Time Dental Composite System	\$2,800 (Value of)	Ivoclar Vivadent	7/1/2020	6/30/2023
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	5/5/2022
Mitchell, J., Schuster, G., Brannock, M., Cohn, M., Carroll, A. & Brachvogel, W.	CDMA	Dental Institute	Anesthesia-free Dentistry?	\$840,000 (Value of)	Convergent Dental	9/30/2017	Open
Mitchell, J. (Magee, A., CDMA '23)	CDMA	Dental Medicine	Mechanical Analysis of Mandibular Implant Supported Protheses Constructed with Fiber Reinforced Resin	\$2,100	American Association of Dental Research	4/1/2020	3/31/2021
Smith, B. & Beals, D.	CDMA	Dental Medicine	A Partnership Protocol for Treatment of Oral Mucositis Using LLLT	\$25,000	Dental Trade Alliance Foundation	10/1/2018	12/31/2021

Total of CDMA Active Extramurally-funded Research Awards: \$1,829,263

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.	CGS	Physiology	Ability of 12 Weeks Moderate Exercise and/or Genistein (Soy) to Reverse Hyperglycemia, Hyperinsulinemia, Fatty Liver Disease and Microbiome Changes Induced by Chronic Consumption of High Fat High Sugar Diet	\$10,000	Diabetes Action and Research Education Foundation (DAREF)	1/1/2021	12/31/2021
Al-Nakkash, L., Broderick, T. & Shim, M.	CGS	Physiology, Biochemistry & Molecular Genetics	Reversal of Diabetic Obesity with Dietary Modifications and/or Exercise Results in Improved Cognitive Ability, Inflammation, Senescence and thus Mitigation of AD-like Pathology	\$11,153 (includes a \$5,576 match from MWU)	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2020	6/30/2021

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Baab, K.	CGS	Anatomy	Testing Adaptive Hypotheses of Plio-Pleistocene Hominin Craniofacial Evolution	\$330,021	National Science Foundation	2/15/2021	1/31/2024
*Broderick, T.	CGS	Physiology	Mechanistic Role of Vascular Dysfunction in TBI-mediated Cognitive Dysfunction	\$28,760	Phoenix VA Health Care System	4/15/2021	4/14/2023
Edwards, J.	CGS	Pharmacology	Mechanisms of Cadmium-induced Dysglycemia	\$446,697	NIH-R15 (AREA)	8/15/2017	7/31/2021
Ellermeier, J.	CGS	Microbiology & Immunology	Genetic Regulation of the Twin Arginine Translocation System in <i>Salmonella enterica</i> serovar Typhimurium	\$150,000	NIH-R03	6/17/2019	12/31/2021
Esfandiarei, M.	CGS	Biomedical Sciences	Targeting Endothelial Dysfunction in a Genetic Mouse Model of Aortic Aneurysm: Implications for Prevention and Therapy	\$441,048	NIH-R15 (AREA) with Subcontracts to the University of British Columbia (\$54,497) and the University of Arizona (\$27,286)	1/15/2019	12/31/2021
Haley, N.	CGS	Microbiology & Immunology	Managing CWD in Farmed Cervids through Antemortem Testing, Targeted Culling, and Development of Genetic Resistance Breeding Programs	\$34,015	North American Deer Farmers Association	3/1/2016	3/1/2021
Henderson, K.	CGS	Physiology	Analytical Assessment of the Cranial Rhythmic Impulse	\$8,000	American Academy of Osteopathy	6/15/2017	6/15/2021
Jadavji, N.	CGS	Biomedical Sciences	Identification of Developmental Factors Involved in Ischemic Stroke Outcomes in Adulthood and Old Age	\$152,735	American Heart Association	1/1/2020	12/31/2021
Jadavji, N.	CGS	Biomedical Sciences	Dietary Vitamin B12 Deficiency on Ischemic Stroke Outcome in Aged Female and Male Mice	\$8,510 (includes a \$4,255 match from MWU)	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2020	6/30/2021
*Jentarra, G.	CGS	Precision Medicine	Targeting Fatty Acid Metabolism in Alzheimer's Disease: A Special Interest in Lauric Acid	\$98,252	NIH-R21 Subcontract from Arizona State University	6/1/2021	5/31/2023
Jentarra, G. & Jones, T.B.	CGS	Precision Medicine, Anatomy	Follow the Evidence: The Role of Microbes in the Development of Alzheimer's Disease	\$40,184 (includes a \$20,092 match from MWU)	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2019	12/31/2020
Jentarra, G., Jones, T.B. & Gonzalez, F.	CGS	Precision Medicine, Anatomy, Biochemistry & Molecular Genetics	Identification and Culture of Microbes in Brain Tissue from Alzheimer's Disease Patients and Controls	\$17,162 (includes a \$8,581 match from MWU)	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2020	6/30/2021
Kim, C.	CGS	Biochemistry & Molecular Genetics	The Role of SAM Polymerization in Polycomb-dependent Chromatin Structures	\$1,019,683	NIH-R01 with a Subcontract (\$455,738) to the Institut de Recherchers Cliniques de Montréal	6/1/2016	5/31/2021
Muldoon, K.	CGS	Anatomy	Collaborative Research: Human and Non-human Influences on Species Biodiversity in an Island Ecosystem	\$44,144	National Science Foundation	3/1/2018	3/31/2021
Olson, C.	CGS	Physiology	Vocalizing in a Complex and Crowded Forest: An Investigation of a Unique Hummingbird Solution	\$30,000	National Geographic Society	10/4/2018	10/31/2021
Olson, C.	CGS	Physiology	Supplement: Vocalizing in a Complex and Crowded Forest: An Investigation of a Unique Hummingbird Solution	\$3,501	National Geographic Society	11/1/2020	10/31/2021

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
O'Neill, M.	CGS	Anatomy	Collaborative Research: The Effects of Musculoskeletal Design on Bipedal Walking and Running Performance in Humans, Chimpanzees and Early Hominins	\$239,935	National Science Foundation	3/1/2021	2/29/2024
Revill, A.	CGS	Physiology	Cholinergic Modulation of XII Motoneurons and XII Premotoneurons	\$447,700	NIH-R15 (REAP)	7/20/2020	6/30/2023
*Revill, A.	CGS	Physiology	Effects of Chronic Intermittent Hypoxia on Cholinergic Modulation of Hypoglossal Motoneurons	\$23,000	NIH PRIDE AIRE	1/1/2021	12/31/2021
Riede, T.	CGS	Physiology	Collaborative Research: Evolution of Long-distance Communication in Vocal Rodents	\$193,774	National Science Foundation	8/1/2018	7/31/2021
Riede, T.	CGS	Physiology	The Role of Vocal Ligament in Fundamental Frequency and Adduction Control	\$201,055	NIH-R01 Subcontract from the University of Utah	1/1/2020	12/31/2024
Riede, T.	CGS	Physiology	The Effect of Obesity on the Form and Function of the Upper Respiratory Airways in the Mouse Model	\$75,000	NIH-U24 Subcontract from the National Mouse Metabolic Phenotyping Center (MMPC), MICROMouse Program at Augusta University	12/1/2020	6/30/2021
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 (REAP)	12/1/2019	11/30/2022
Swanson, M. & Bae, N.	CGS	Biochemistry & Molecular Genetics	The Role of Phosphorylation on the Function of the Telomere Protection Protein RAP1	\$8,175 (includes a \$4,087 match from MWU)	Arizona Department of Health Services through the Arizona Alzheimer's Research Center, Inc.	7/1/2020	6/30/2021
Townsend, K.E.B.	CGS	Anatomy	Collaborative Research: After the Bridgerian Crash - An Integrated Analysis of Mammalian Paleocommunities and Paleocologies During the Middle Eocene	\$239,596	National Science Foundation with a Subcontract (\$20,000) to the Rochester Museum and Science Center	5/15/2020	4/30/2023

Total of CGS Active Extramurally-funded Research Awards: \$4,752,100

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Evans, C.	CHS-DG	Physical Therapy	Patterns and Sources for Contamination and Effectiveness of Cleaning Strategies in an Outpatient Physical Therapy Clinic	\$990	Illinois Physical Therapy Association Foundation	1/1/2020	12/31/2021
*Helminski, J.	CHS-DG	Physical Therapy	Vestibular Function in Balance in People with Diabetes Mellitus	\$22,912	Department of Veterans Affairs, Office of Research & Development, Small Projects in Rehabilitation Research (SPIRE)	5/3/2021	5/1/2023
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	11/30/2021
Saletta, M.	CHS-DG	Speech-Language Pathology	Advancing Academic and Research Careers	\$4,280	American Speech-Language-Hearing Association	8/18/2019	10/31/2020

Total of CHS-DG Active Extramurally-funded Research Awards: \$1,185,461

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
de Diego-Lazaro, B.	CHS-GD	Speech-Language Pathology	Spaced-Word Retrieval as a Vocabulary Teaching Strategy for Children with Hearing Loss	\$7,096	Society for Research in Child Development	7/1/2020	6/30/2021
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	12/31/2023
Ratiu, I.	CHS-GD	Speech-Language Pathology	The Impact of Auditory Distraction on Executive Function and Reading Comprehension in Individuals With and Without Mild Traumatic Brain Injury: An Eye-Tracking Study	\$10,000	American Speech-Language-Hearing Foundation	11/21/2020	12/31/2021

Total of CHS-GD Active Extramurally-funded Proposals: \$27,317

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
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
Huang, V.	CPG	Pharmacy Practice	<i>In vitro</i> Activity of Ceftaroline Alone and in Combination with Daptomycin at High and Low Doses Against Methicillin-resistant <i>Staphylococcus aureus</i> in an <i>in vitro</i> Pharmacodynamic Model	\$164,208 (Value of)	Allergan	10/19/2020	6/30/2022
Huang, V.	CPG	Pharmacy Practice	Shionogi BMD U.S. Surveillance Program	\$6,000	Shionogi & Co., Ltd. through International Health Management Associates	10/20/2020	10/19/2021
Olsen, M.	CPG	Pharmaceutical Sciences	Developing a Safe and Effective Anticoronaviral Therapy for Client-owned Cats with FIP	\$7,000	Winn Feline Foundation Subcontract from the University of California-Davis	4/1/2020	12/31/2021
Veltri, C.	CPG	Pharmaceutical Sciences	Pharmacological and Phytochemical Investigations of Kratom (<i>Mitragyna speciosa</i> Korth.) in the Nematode <i>Caenorhabditis elegans</i>	\$9,978	Center for Plant Science and Health	12/1/2019	6/30/2021
Weissig, V.	CPG	Pharmaceutical Sciences	Development Supplement Request: Testing and Development of Monosialoganglioside-containing Nanoliposomes to Mitigate Damage	\$14,000	Phoenix VA Health Care System	6/1/2020	5/31/2022
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	12/31/2021
Yao, M. & Elbayoumi, T.	CPG	Pharmaceutical Sciences	Atrial Fibrillation Strategically Focused Research Network: Atrial Substrate in Atrial Fibrillation and AF-associated Brain Disease	\$126,979	American Heart Association Subcontract from Northwestern University	7/1/2018	6/30/2022

Total of CPG Active Extramurally-funded Research Awards: \$429,335

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Costa, R.	CVM	Veterinary Medicine	Gabapentin, Melatonin and Acepromazine Combined Prior to Hospital Visits for Aggressive and Anxious Dogs	\$2,000	FearFree	11/1/2020	10/31/2021
Gartrell, C. & Ghasemi, A.	CVM	Veterinary Medicine	Longitudinal Tracking of Outcomes Assessment: Growth Trajectories of Student Academic Success	\$10,000	International Council for Veterinary Assessment	2/1/2021	1/31/2023
Kreisler, R.	CVM	Veterinary Medicine	Shelter Veterinarian Survey Publications	\$3,840	PetSmart Charities	12/22/2020	11/30/2021
Murthy, A.	CVM	Veterinary Medicine	USDA Animal Health and Disease Research Grant	\$22,902	USDA National Institute of Food and Agriculture	10/1/2018	9/30/2021
Murthy, A.	CVM	Veterinary Medicine	Mechanism(s) of CD8 ⁺ T Cell-mediated Chlamydia-induced Reproductive Pathology	\$450,000	NIH-R15 (REAP)	7/1/2019	6/30/2022
Murthy, A.	CVM	Veterinary Medicine	USDA Animal Health and Disease Research Grant	\$13,728	USDA National Institute of Food and Agriculture	10/1/2019	9/30/2021
Murthy, A.	CVM	Veterinary Medicine	PetSmart Charities Veterinary Research Fellowship	\$8,500	PetSmart Charities	1/1/2020	5/31/2021
Murthy, A.	CVM	Veterinary Medicine	Boehringer Ingelheim Veterinary Scholars Program	\$25,000 (includes a \$10,000 match from MWU)	Boehringer Ingelheim	4/15/2020	9/30/2020
*Murthy, A. & Wycislo, K.	CVM	Veterinary Medicine	Boehringer Ingelheim Veterinary Scholars Program	\$40,000 (includes a \$20,000 match from MWU)	Boehringer Ingelheim	4/1/2021	10/31/2021
Siler, A., Lopez, B. & Starks, D.	CVM	Veterinary Medicine	League of VetaHumanz, MWU Chapter: This is How We "Role"	\$1,500	NIH-R25 Subcontract from Purdue University	1/1/2021	12/31/2021

Total of CVM Active Extramurally-funded Research Awards: \$577,470

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Impens, A.	n/a	Institute for Healthcare Innovation	Electronic Course: Making Medicines: The Process of Drug Development	\$4,200 (In-Kind)	Lilly USA, LLC	9/1/2019	8/31/2021
Lipinski, C.	n/a	Institute for Healthcare Innovation	COVID Interventional Drug Study	\$196,850	Pharmaceutical Sponsor with a Subcontract (\$81,868) to Abrazo Hospitals and Consultant Costs of \$54,000	12/15/2020	7/1/2021
Woods, C., Thomas, K. & Gonzalez-Cintron, O.	CVM	Animal Health Institute	PILOT: Multi-center, Masked, Randomized Clinical Field Study to Evaluate the Effectiveness and Safety of Resiniferatoxin (RTX) Compared to a Sham Injection for the Control of Pain Associated with Osteoarthritis of the Elbow in Dogs	~\$62,000	Pharmaceutical Sponsor	8/5/2019	9/30/2020
Woods, C. & VanDenBerg, C.	n/a	Animal Health Institute	Evaluation of an Immune Support Formula in Dogs with Valley Fever	~\$18,250	Pharmaceutical Sponsor	10/9/2019	Open

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

Investigator/s	College	Department	Proposal Title	Total	Agency	Start Date	End Date
Woods, C. & 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
Woods, C. & VanDenBerg, C.	n/a	Institute for Healthcare Innovation	Multiplexed In-solution Serological Test for SARS-CoV-2, Human Coronaviruses and Other Respiratory Pathogens	\$703,771	Leidos Biomedical Research, LLC (NIH) Subcontract from Arizona State University	10/01/2020	09/30/2025

Total of IHI Active Extramurally-funded Research Awards: \$1,162,187

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: \$12,692,553

Arnouk H (CGS) & **Panicker B** (CCOM). (2020) $\gamma\delta$ T cells as immuno-oncology treatments in the era of precision medicine. *Journal of Cancer Research and Advanced Therapeutics* 1(2):24-29.

Avedissian SN, **Pais G** (CCP), **Liu J** (CCP), O'Donnell N, Lodise TP, Neely M, **Prozialeck WC** (CGS), **Lamar PC** (CGS), **Becher L** (CCP) & **Scheetz MH** (CCP). (2021) The pharmacodynamic-toxicodynamic relationship of AUC and C_{max} in vancomycin-induced kidney injury in an animal model. *Antimicrobial Agents and Chemotherapy* February 17:epub ahead of print.

*Avedissian SN, Pham M, **Joshi MD** (CPG), **Scheetz MH** (CCP), **Salamatipour A** (CCP), **Panickar JM** (CCP), **Hlukhenka K** (CCP), **Miglis C** (CCP), Chalkias A & Xanthos T. (2021) Pharmacokinetic disposition of amiodarone when given with an intralipid rescue strategy. *Pharmaceutics* 13:539.

Bennett C (AZCOM), **Green J** (CGS), **Ciancio M** (CGS), **Goral J** (CGS), **Pitstick L** (CGS), **Pytynia M** (CGS), **Meyer A** (CGS), **Kwatra N** (CDMA) & **Jadavji NM** (CGS). (2020) Dietary folic acid deficiency impacts hippocampal morphology and cortical acetylcholine metabolism in adult male and female mice. *bioRxiv* December 13:epub ahead of print.

***Buhlman LM** (CGS), **Keoseyan PP** (AZCOM), **Houlihan K** (CGS) & **Juba AN** (CGS). (2021) Measuring mitochondrial hydrogen peroxide levels and glutathione redox equilibrium in drosophila neuron subtypes using redox-sensitive fluorophores and 3D imaging. In V Weissig & M Edeas (Eds.) *Mitochondrial Medicine, Volume 2: Assessing Mitochondria*. (pp.113-127). New York, NY: Humana Press.

Burgess K (CVM), **Bennett C** (AZCOM), Mosnier H, **Kwatra N** (CDMA), **Bethel F** (AZCOM) & **Jadavji NM** (CGS). (2020) The antioxidant role of one-carbon metabolism on stroke. *Antioxidants* 9(11):1141.

***Cryder BT** (CCP), **Lee MM** (CHS-DG), Workman GM & **Krumdick N** (CHS-DG). (2021) Frequency, setting and influential factors associated with pharmacy student-patient encounters involving spirituality and religiosity during advanced practice rotations. *Currents in Pharmacy Teaching and Learning* 13(7):753-759.

Daraghma H (CGS), **Untiveros G** (CGS), **Raskind A** (CGS), Iaccarino E, Sandomenico A, Ruvo M, **Arnouk H** (CGS), **Ciancio MJ** (CGS), **Cuevas-Nunez M** (CDMI) & **Strizzi L** (CGS). (2020) The role of Nodal and Cripto-1 in human oral squamous cell carcinoma. *Oral Diseases* September 11:epub ahead of print.

Ferris RL, Stacy N, **Stein AB** (ORSP), Chiles H & **Goe A** (CVM). (2020) Comparison of fecal cytology and presence of *Clostridium perfringens* enterotoxin in captive black-footed ferrets (*Mustela nigripes*) based on diet and fecal quality. *Journal of Zoo and Wildlife Medicine* 51(4):814-824.

Fields Marsh S (CVM), **Manfredi K** (CGS) & **Smith HF** (CGS). (2020) Myological and osteological correlates of hindfoot reversal in the Kinkajou (*Potos flavus*). *Journal of Mammalian Evolution* January 3:epub ahead of print.

Fitzgerald R (CCOM), **Olsen A** (CCOM), **Nguyen J** (CCP), Wong W, El Muayed M & **Edwards J** (CGS). (2021) Pancreatic islets accumulate cadmium in a rodent model of cadmium-induced hyperglycemia. *International Journal of Molecular Sciences* 22:360.

Flores M (AZCOM), Kairus K, **Ater S** (AZCOM), **Stein A** (ORSP), **Chen G** (AZCOM) & **Mifflin M** (AZCOM). (2021) Implementation of a mental health screening tool at an adult homeless shelter student-run free clinic in Arizona. *Journal of Student-Run Clinics* 7(1).

Fornaro M (CGS), **Marcus D** (CCOM), **Rattin J** (CCOM) & **Goral J** (CGS). (2021) Dynamic environmental physical cues activate mechanosensitive responses in the repair Schwann cell phenotype. *Cells* 10:425.

Garner DK (AZCOM), **Patel AB** (AZCOM), **Hung J** (AZCOM), **Castro M** (CGS), **Segev TG** (AZCOM), Plochocki JH & **Hall MI** (CGS). (2021) Midline and mediolateral episiotomy: Risk assessment based on clinical anatomy. *Diagnostics* 11:221.

Green JM (CGS), **Ciancio MJ** (CGS), **Goral J** (CGS), **Pytynia M** (CGS), **Pitstick L** (CGS), **Meyer A** (CGS), **Nguyen A** (CDMI), **Lee K** (CDMI), **Barakat A** (CGS) & **Jham BC** (CDMI). (2020) Dietary fat and male sex increase histopathological changes in a mouse model of oral cancer. *Oral Diseases* July 8:epub ahead of print.

PEER-REVIEWED PUBLICATIONS - MULTI-COLLEGE COLLABORATIONS (Continued)

Groen K (CHS-DG), **Robison P** (CHS-DG), **Xiong A** (CHS-DG), **Irwin KE** (CHS-DG), **Buros Stein A** (ORSP) & **Evans CC** (CHS-DG). (2020) How effective is aerobic exercise training in improving aerobic capacity after heart transplant? A systematic review and meta-analysis. *Cardiopulmonary Physical Therapy Journal* October 23:epub ahead of print.

Gutierrez-Luke SJ (AZCOM), **Juba AN** (CGS), Bertolin G & **Buhlman LM** (CGS). (2021) 3D quantification of autophagy activation and autophagosome-to-mitochondria recruitment in a *Drosophila* model of Parkinson's disease. *STAR Protocols* 2(2):100408.

Hays E (CGS), **Nettleton E** (CCOM), **Carter C** (CCOM), **Morales M** (CGS), **Vo L** (CCOM), **Passo M** (CGS) & **Vélez-Cruz R** (CGS). (2020) The SWI/SNF ATPase BRG1 stimulates DNA end resection and homologous recombination by reducing nucleosome density at DNA double strand breaks and by promoting the recruitment of the CtIP nuclease. *Cell Cycle* 19(22):3096-3114.

Jones JC (CGS), **Miceli AM** (CCP), **Chaudhry MM** (CGS), **Kaunitz CS** (CCOM), **Jai MA** (CGS), **Pancho RN** (CGS), **Lazzar A** (CGS), **Taylor BS** (CGS), **Bodempudi V** (CGS), **Jain PP** (CCOM), **Hanjra S** (CGS), **Urban AE** (CCOM), **Zanotti B** (CGS), **Kohlmeir EK** (Core Facilities) & **Bodenstine TM** (CGS). (2021) Glucose-limiting conditions induce an invasive population of MDA-MB-231 breast cancer cells with increased connexin 43 expression and membrane localization. *Journal of Cell Communication and Signaling* February 16:epub ahead of print.

Maiden A (AZCOM), **Scott S** (AZCOM), **Raney E** (CPG) & **Strobridge M** (AZCOM). (2021) Nonalcoholic steatohepatitis: Case-based focused on pediatric and adult guidelines. *Osteopathic Family Physician* 13(2):29-37.

McGuire RS (AZCOM), **Ourfalian R** (AZCOM), **Ezell K** (CGS) & **Lee AH** (CGS). (2020) Development of limb bone laminarity in the homing pigeon (*Columba livia*). *PeerJ* 8:e9878.

Metastasio A, Preve E, Singh D, Grundmann O, **Prozialeck WC** (CGS), **Veltri C** (CPG), Bersani G & Corazza O. (2020) Can Kratom (*Mitragyna speciosa*) alleviate COVID-19 pain? A case study. *Frontiers in Psychiatry* 11:594816.

Mirande MH (AZCOM), **Durhman MR** (AZCOM) & **Smith HF** (CGS). (2020) Anatomic investigation of two cases of aberrant right subclavian artery syndrome, including the effects on external vascular dimensions. *Diagnostics* 10(8):592.

Pascual AS (CGS), **Rapanan JL** (GME), **Uppalapati CK** (CGS), **Cooper KE** (CGS), **Leyva KJ** (CGS) & **Hull EE** (CGS). (2021) Dual inhibition of TGF β R and ROCK reverses the epithelial to mesenchymal transition in collectively migrating zebrafish keratocytes. *Cell Biology International* March 12:epub ahead of print.

Prozialeck WC (CGS), **Edwards JR** (CGS), **Lamar PC** (CGS), **Plotkin BJ** (CGS), **Sigar IM** (CGS), **Grundmann O** (CPG) & **Veltri CA** (CPG). (2020) Evaluation of the mitragynine content, levels of toxic metals and the presence of microbes in kratom products purchased in the Western suburbs of Chicago. *International Journal of Environmental Research and Public Health* July 30:epub ahead of print.

Riede T (CGS), **Coyne M** (CVM), **Tafoya B** (CVM) & **Baab KL** (CGS). (2020) Postnatal development of the mouse larynx: Negative allometry, age-dependent shape changes, morphological integration, and a size-dependent spectral feature. *Journal of Speech, Language, and Hearing Research* 63(8):2680-2694.

Singh D, Brown PN, Cinosi E, Corazza O, Henningfield JE, Garcia-Romeu A, McCurdy CR, McMahan LR, **Prozialeck WC** (CGS), Smith KE, Swogger MT, **Veltri C** (CPG), Walsh Z & Grundmann O. (2020) Current and future potential impact of COVID-19 on Kratom (*Mitragyna speciosa* Korth.) supply and use. *Frontiers in Psychiatry* 11:574483.

Smith HF (CGS), **Adrian B** (CGS), **Koshy R** (AZCOM), **Alwiel R** (CVM) & **Grossman A** (CGS). (2020) Adaptations to cursoriality and digit reduction in the forelimb of the African wild dog (*Lycaon pictus*). *PeerJ* 8:e9986.

Swartzendruber JA (CGS), Nicholson BJ & **Murthy AK** (CVM). (2020) The role of connexin 43 in lung disease. *Life* 10(12):363.

Tiwari V (CGS), **Beer JC** (CCOM), Sankaranarayanan NV, **Swanson-Mungerson M** (CGS) & Desai UR. (2020) Discovering small-molecule therapeutics against SARS-CoV-2. *Drug Discovery Today* 25(8):1535-1544.

PEER-REVIEWED PUBLICATIONS - MULTI-COLLEGE COLLABORATIONS (Continued)

Verdone M, **Joshi M** (CCP), **Bodenstine TM** (CGS), **Green J** (CGS), **Lynch S** (CGS), **Gettig JP** (CCP) & **Fjortoft N** (CCP). (2020) An online, self-directed pharmacy bridging course for incoming first-year students. *American Journal of Pharmacy Education* 84(7):7684.

Wong SJ, **Senkovich O** (CGS), **Artigas JA** (CGS), Gearhart M, Ilangovan U, **Graham DW** (AZCOM), **Abel KN** (CGS), **Yu T** (AZCOM), Hinck AP, Bardwell VJ & **Kim CA** (CGS). (2020) Structure and role of BCOR PUF1 in noncanonical PRC1 assembly and disease. *Biochemistry* 59(29):2718-2728.

PEER-REVIEWED PUBLICATIONS - AZCOM

*Craig B, Wang X, Sandella J, Tsai T-H, Kuo D & **Finch C**. (2021) Examining concurrent validity between COMLEX-USA level 2-cognitive evaluation and COMLEX-USA level 2-performance evaluation. *Journal of Osteopathic Medicine* May 13:epub ahead of print.

PEER-REVIEWED PUBLICATIONS - AZCOPT

Addy LK & Harrison WW. (2020) Case report: Long-term structural and functional effects of ethambutol optic neuropathy. *Optometry and Vision Science* 97(8):555-560.

*Cheng H, Ciuffreda KJ, Jiang H, Zhou K, Lin S, Zheng J, Yu X, **Vasudevan B** & Liang Y. (2021) Cone parameters in different vision levels from the adaptive optics imaging. *Medicine* 100(16):e25618.

Kozlowski MR, **Kozlowski RE** & **Spear J**. (2020) Evidence of RPE cell senescence in AMD from comparison of telomere lengths in central and peripheral retina. *Journal of Ophthalmology & Optometry* 2(5):100005.

Liang YB, **Vasudevan B**, Lin Z, Zhou HJ & Ciuffreda KJ. (2020) The effect of eye exercises of acupoints on myopia progression: A 3-year cohort report from the Beijing Myopia Progression Study. *Risk Management and Healthcare Policy* 13:2793-2799.

Lin Z, **Vasudevan B**, Gao T, Zhou H, Ciuffreda KJ & Liang Y. (2021) Refractive change and incidence of myopia among rural Chinese children: The Handan Offspring Myopia Study. *British Journal of Ophthalmology* January 13:epub ahead of print.

Lin Z, **Vasudevan B**, Liang YB, Zhou HJ & Ciuffreda KJ. (2020) The association between nearwork-induced transient myopia and progression of refractive error: A 3-year cohort report from Beijing Myopia Progression Study. *Journal of Optometry* July 29:epub ahead of print.

Tang Y, Chunchun L, Yanyan C, Zhangyan C, Peihua Z, Aisun W, Xiaoqiong H, Jia Q, Mengchen L, Siwen M & **Vasudevan B**. (2020) Effect of intraocular pressure on aerosol density generated by noncontact tonometer measurement. *Journal of Glaucoma* September 15:epub ahead of print.

PEER-REVIEWED PUBLICATIONS - CCO

Liu C, Wu H, Lao J, Wu S, Xu X, Lv Z & Mao J. (2020) Measurement and analysis of central corneal thickness at different postnatal stages in Chinese premature infants. *Journal of Ophthalmology* 2020:7313909.

Lucy JC. (2020) Ocular complications of confirmed novel coronavirus SARS-COV-2 in a systemically asymptomatic patient using telehealth: A teaching case study and the optometrist's role in cultural competent public health. *Optometric Education* 46(1).

Lucy JC. (2020) Secondary open-angle glaucoma in presumed ocular histoplasmosis syndrome. *Advances in Ophthalmology & Visual System* 10(4):74-77.

***Nadarajah V**. (2021) Case report: Modified piggyback system to treat peripheral iridotomies and degenerative myopia. *Optometry and Vision Science* 98(5):446-449.

Ruiz-Alocer J, Lorente-Velázquez A, Hernández-Verdejo JL, **De Gracia P** & Madrid-Costa D. (2020) Optical performance of a trifocal IOL and a novel extended depth of focus IOL combined with different corneal profiles. *Journal of Refractive Surgery* 36(7):435-441.

PEER-REVIEWED PUBLICATIONS -
CHICAGO COLLEGE OF OSTEOPATHIC MEDICINE (CCOM)

Bhai SA & Poustinchian B. (2021) The flipped classroom: A novel approach to physical examination skills for osteopathic medical students. *Journal of Osteopathic Medicine* February 25: epub ahead of print.

Ladage V, Jones M, Ahmad F, Plamoottil C, Misesk R & Alexander-Anyago N. (2020) Pulmonary embolism presenting as an anterior ST-elevation myocardial infarction: A case report. *Clinical Practice and Cases in Emergency Medicine* September 23: epub ahead of print.

Twum K, **Schileru N**, Elias B, Feder J, Yaqoo L, Puttreddy R, Szczesniak MM & Beyeh NG. (2020) Water soluble host-guest chemistry involving aromatic *N*-Oxides and sulfonateresorcinarene. *Symmetry* 12:1751.

PEER-REVIEWED PUBLICATIONS - CCP

Al-Shaer MH, Neely MN, **Liu J**, Cherabuddi K, Venugopalan V, **Rhodes NJ**, Klinker K, **Scheetz MH** & Peloquin CA. (2020) Population pharmacokinetics and target attainment of cefepime in critically ill patients and guidance for initial dosing. *Antimicrobial Agents and Chemotherapy* 64(9):e00745-20.

Avedissian SN, **Rohani R**, Bradley J, Le J & **Rhodes NJ**. (2020) Optimizing aminoglycoside dosing regimens for critically-ill pediatric patients with augmented renal clearance: A convergence of parametric and non-parametric population approaches. *Antimicrobial Agents and Chemotherapy* February 1: epub ahead of print.

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Barreto EF, Rule AD, Alshaer MH, Roberts JA, Hafiz M, Aziz MHA, **Scheetz MH**, Mara KC, Jannetto PJ, Gajic O, O'Horo JC & Boehmer KR. (2021) Provider perspectives on beta-lactam therapeutic drug monitoring programs in the critically ill: A protocol for a multicenter mixed-methods study. *Implementation Science Communications* 2:34.

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Censi M, Rhodes NJ, Gettig JP, Lullo A & Borchert J. (2020) Effects of advanced pharmacy practice experience characteristics on postgraduate year 1 residency match rates. *Journal of Pharmacy Practice* September 15: epub ahead of print.

Chalkias A, Barreto EF, Laou E, Kolonia K, **Scheetz MH**, Gourgoulianis K, Pantazopoulos I & Xanthos T. (2021) A critical appraisal of the effects of anesthetics on immune-system modulation in critically ill patients with COVID-19. *Clinical Therapeutics* January 9: epub ahead of print.

Chang J, Liu J, Kaye KS & Scheetz MH. (2020) Vancomycin duration therapy. *Clinical Infectious Diseases* December 13: epub ahead of print.

Cornell S. (2020) A review of GLP-1 receptor agonists in type 2 diabetes: A focus on the mechanism of action of once-weekly agents. *Journal of Clinical Pharmacy and Therapeutics* 45(Supplement1):17-27.

***Cornell S & Cryder B.** (2021) Diabetes update: Beyond glycemic management. *The Rx Consultant* 30(6):1-14.

Cox CL, **Todd TJ**, Lubsch L, Klein KC, Prescott WA Jr, Knoderer CA, Johnson PN, Meyers R, Cole JW, LaRochelle JM, Worthington MA & Smith K. (2020) Joint statement on pediatric education at schools of pharmacy. *American Journal of Pharmaceutical Education* 84(8):7892.

Fares M, Heron BB, Atienza S, Tan M, Savage Grate L, **Seddon AN**, Roddy J, McCue DA & Bates JS. (2020) Value of cancer care forum: Pharmacy call to action. *Journal of Hematology Oncology Pharmacy* 10(4):212-219.

Gettig JP & Fjortoft NF. (2020) Students' descriptions of their collective co-curricular learning mapped to outcomes. *American Journal of Pharmacy Education* 84(9):7825.

Gilchrist A. (2020) Chemokines and bone. *Handbook of Experimental Pharmacology* July 14: epub ahead of print.

***Gulati A, Jain D, Agrawal NR, Rahate P, Choudhuri R, Das S, Dhibar DP, Prabhu M, Haveri S, Agarwal R & Lavhale MS.** (2021) Resuscitative effect of centhaquine (Lyfaquin®) in hypovolemic shock patients: A randomized, multicentric, controlled trial. *Advances in Therapy* May 10: epub ahead of print.

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Liu J, Mercurio NJ, Davis SL, Palmo T, Kashyap S, Patel TS, Petty LA, Yarnold PR, Kaye KS & Scheetz MH. (2020) Antimicrobial never events: Objective application of a framework to assess vancomycin appropriateness. *Infection Control & Hospital Epidemiology* December 29: epub ahead of print.

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PEER-REVIEWED PUBLICATIONS - CHS-GD

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PEER-REVIEWED PUBLICATIONS - CVM (Continued)

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Struthers JD, Lim A, Ferguson S, Lee JK, Chako C, Okwumabua O, Cuneo M, Montiel-Del Valle A & Brower A. (2021) Meningoencephalitis, vasculitis, and abortions caused by *Chlamydia pecorum* in a herd of cattle. *Veterinary Pathology* February 16: epub ahead of print.

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Sullins KE. (2020) Melanocytic tumors in horses. *Equine Veterinary Education* 12:624-630.

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PATENTS ISSUED

Mark Olsen (CPG)

Title: Monoclonal Antibodies Targeting Epitopes of ASPH

Inventor: Olson MJ

U.S. Patent Number: 10,961,320B2

Date Issued: March 30, 2021

Title: Isotopically-stabilized Tetronimide Compounds

Inventors: Olsen MJ, Seerden JP

U.S. Patent Number: 10,961,211B2

Date Issued: March 30, 2021

Scheetz MH & Rhodes NJ (CCP)

Title: Antibiotic-coated Nanoparticles

Inventors: Hauser AR, Lee A, Scheetz MH, Rhodes NJ

U.S. Patent Number: 10,688,195

Date Issued: June 23, 2020

Weissig V (CPG)

Title: Nanoliposome Compositions and Methods of Using the Same

Inventors: Migrino R, Truran S, Karamonova N, Weissig V, Madine J & Davis H.

International Patent Number (under the Patent Cooperation Treaty): WO2020/041012A2

Date Issued: February 27, 2020

INTRAMURAL FUNDING

AZCOPT

Investigator/s	College	Department	Proposal Title
Baker, J., Putnam, N. & Kozlowski, M.	AZCOPT	Optometry	Can Pharmaceutical Agents Reduce Blue Light Damage to the Eye?
Brosnahan, M., Matyjaszek, S. & Roe, M.	AZCOPT	Optometry	Effects of Stroboscopic Technology in Teaching Veterinary Suturing Techniques
Kozlowski, M.	AZCOPT	Optometry	<i>In Vivo</i> Evaluation of Drug Candidates for the Treatment of Dry Eye
Putnam, N.	AZCOPT	Optometry	Clinical Applications of Tracking Scanning Laser Ophthalmoscopy (TSLO) at the Arizona College of Optometry
Thomas, S., Cusimano, F., Nguyen, A., Work, R. & Wang K.U.	AZCOPT	Optometry	The Effect of Vaping on Macular Pigment Optical Density (MOPD)
Vasudevan, B. & Fintelmann, R.	AZCOPT	Optometry	Effect of Vision Rehabilitation on Accommodative Ability with Bausch and Lomb Crystalens AO JnJ enVista

Total AZCOPT Intramural Funding: \$25,795

ARIZONA COLLEGE OF PODIATRIC MEDICINE (AZCPM)

Investigator/s	College	Department	Proposal Title
Violand, M.	AZCPM	Podiatry	Comparison of Evaluation of How Sport Specific Shoes Effect Heel Peak Pressures on Varying Terrain with and without Heel Lift
Violand, M.	AZCPM	Podiatry	Comparison of Plantar Foot Pressures for Upright and Recumbant Bicycles

Total AZCPM Intramural Funding: \$3,052

CCO

Investigator/s	College	Department	Proposal Title
Gialousakis, J.	CCO	Optometry	The Effect of Physical Activity on the Aqueous Layer of the Tear Film
Jose, J., Upadhyaya, S. & Nadarajah V.	CCO	Optometry	Reliability, Repeatability, and Reproducibility of Oculus Keratograph 5M Non-invasive Tear Breakup Time (NIK BUT) at the Midwestern University Eye Institute
Nadarajah, V. & Upadhyaya, S.	CCO	Optometry	Scleral Piggyback Contact Lens System (SPBCLS) in Healthy Eyes: Impact & Promises
Prestwich, C. & Williams, J.	CCO	Optometry	Accuracy of Prism Power and Placement in Online Spectacle Order
Upadhyaya, S.	CCO	Optometry	Pilot Study of Eye Tracking on Digital Image Analysis: A Window for Effective Learning

Total CCO Intramural Funding: \$8,715

CCP

Investigator/s	College	Department	Proposal Title
Briyal, S.	CCP	Pharmaceutical Sciences	Neuroprotective Effect of Sovateltide (IRL-1620) Following Hypoxic-Ischemic Encephalopathy in Neonatal Rats
Gilchrist, A.	CCP	Pharmaceutical Sciences	Development of a Flow Cytometry Assay for Membrane Bound KIM-1
Pais, G.	CCP	Pharmaceutical Sciences	Defining Neurotoxicity to Restore Susceptibility for Cefepime, a Prototype Beta-Lactam Antibiotic
Ranjan, A.	CCP	Pharmaceutical Sciences	Development of Centhaquin as a Resuscitative Agent to Treat Septic Shock

Total CCP Intramural Funding: \$29,500

INTRAMURAL FUNDING

CGS

Investigator/s	College	Department	Proposal Title
Al-Nakkash, L.	CGS	Physiology	Exercise-induced Effects on Small Intestinal Tissue in a Mouse Model of Aging
Bae, N.	CGS	Biochemistry & Molecular Genetics	Assessing the DNA Binding Properties of the Human Telomere Protection Protein RAP1
Bjork, B.	CGS	Biochemistry & Molecular Genetics	Identification and Validation of Differential Gene/Protein Expression in Prdm16 and Mecom Mutant Mouse Orofacial Tissues
Bodenstine, T.	CGS	Biochemistry & Molecular Genetics	Characterizing Metabolic Reprogramming in Breast Cancer Cells Using a Seahorse Bioanalyzer
Broderick, T.	CGS	Physiology	Impact of Type1 Diabetes on the Expression of High Affinity Intestinal Carnitine Carriers
Chandar, N.	CGS	Biochemistry & Molecular Genetics	Retinoblastoma Binding Proteins and Beta-Catenin Pathway During Osteoblast Differentiation
Ciancio, M.	CGS	Biomedical Sciences	Selective Heat Shock Protein 70 Expression Prevents Chlamydia-induced Pathology
Fay, M.	CGS	Pharmacology	<i>In vitro</i> Evaluation of miR-126a-5p Expression and Function in Cadmium-induced Kidney Injury
Fornaro, M.	CGS	Anatomy	Evaluation of Possible NGF-dependend Clustering Formation of Primary Culture of DRG Neurons
Georgi, J.	CGS	Anatomy	A Zebrafish Model of Sonically-induced Mild Traumatic Brain Injury (mTBI)
Gonzalez, F.	CGS	Microbiology & Immunology	Further Characterization of the <i>Candida albicans</i> 26S Proteasome
Goral, J.	CGS	Anatomy	Effects of Diet and Sex on 4NQO-induced Histopathological Changes in Various Organs: Role of Immune Response
Green, J.	CGS	Biochemistry & Molecular Genetics	Does the 4NQO-induced Mouse Model of Oral Cancer Cause Pathological Changes in Liver, Kidneys and Lungs?
Grossman, A.	CGS	Anatomy	Fossil Vertebrates From Two Early Miocene Formations in Israel
Haley, N.	CGS	Microbiology & Immunology	Evaluation of Winter Ticks (<i>Dermacentor albipictus</i>) from Elk as Potential Reservoirs of Chronic Wasting Disease Prions
Hall, M.	CGS	Anatomy	Functional and Developmental Diversity in the Mammalian Pelvis and Perineum with Special Emphasis on Human Prostate
Heesy, C.	CGS	Anatomy	Evaluation of Diffusible Iodine-based Computed Tomography (diceCT) as a Method for Allometric Studies of the Vertebrate Central Nervous System
Hnida, J.	CGS	Microbiology & Immunology	Coccidia of White-tailed Antelope Squirrel and Gray-collared Chipmunk Populations in Northern Arizona
Hull, E.	CGS	Biomedical Sciences	Identification of Epigenetic Factors in Tumor Cell Plasticity
Jones, D.	CGS	Pharmacology	Effects of Norclozapine on i2-amyloid Levels and Receptor Uncoupling in Alzheimer's Disease
Kaufman, J. A.	CGS	Anatomy	Molecular Markers of Sonically Induced Mild Traumatic Brain Injury (mTBI) in Zebrafish
Kopf, P.	CGS	Pharmacology	Endocrine Disruptors and Adrenal Steroidogenesis
Korch, S.	CGS	Pharmacology	Analysis of Metabolic Adaptations in HeLa Cancer Cells as a Function of Energy Status Using a Novel, Direct ATP Chelation Methodology
Kristjansdottir, K.	CGS	Biomedical Sciences	Isolating Pure Populations of Cells to Measure the Role of NPM1 in Invasion and Cisplatin Sensitivity of Neuroblastoma Cells
Lawson, K.	CGS	Biochemistry & Molecular Genetics	P-cadherin-dependent Signaling and Chemoresistance

INTRAMURAL FUNDING

CGS (Continued)

Investigator/s	College	Department	Proposal Title
Lee, A. H.	CGS	Anatomy	Development of Bone Laminarity in Soaring and Active-flapping Birds
LePard, K. J.	CGS	Physiology	Glucose Uptake by Pancreatic Islets
Leyva, K. J.	CGS	Microbiology & Immunology	EMT and Immune Responses to Cutaneous Squamous Cell Carcinoma
Malaiyandi, L.	CGS	Anatomy	Muscarinic and Adrenergic Receptor Cooperativity in Adrenal Cortex Physiology
Martinez-Guryrn, K.	CGS	Biomedical Sciences	The Impact of Neonatal Delivery of Obesogenic Microbes on Lipid Absorption and Obesity in Adulthood
Mayer, A. M. S.	CGS	Pharmacology	Isolation of Human Microglia from Human De-identified Brain Cultures and Effect of Cyanobacterial LPS on Immune Activation
McCulloch, P.	CGS	Physiology	Brainstem Cardiorespiratory Control Mechanism
Muldoon, K.	CGS	Anatomy	Survey of Caregivers' Knowledge and Experiences with Congenital Cytomegalovirus (cCMV)
Norris, J.	CGS	Pharmacology	Measurement of Immune Biomarkers in Normal Lung and Lung Tumor Tissues from C57Bl/6LA2 Mice Fed a Western Diet
Pierce, M.	CGS	Pharmacology	Effect of Oxytocin Analogs on Pharmacological Signaling, Neural Maturation, and Neural Connectivity in Murine Primary Hippocampal Cultures
Plotkin, B. J.	CGS	Microbiology & Immunology	Anaerobic Isolation, Metabolism and Chemotherapeutic Sensitivity of Isolated Tumor Cells from Patients
Porta, M.	CGS	Physiology	The Memory of Pregnancy in the Uterus: Contractility
Simons, E.	CGS	Anatomy	The Development of Bone Laminarity and Collagen Fiber Orientation in Chickens
Smith, H. F.	CGS	Anatomy	Microanatomical Analyses (Paleohistology and Micro-computed Tomography) of Helochelyrid and Dermatemydid Turtles from the Arlington Archosaur Site
Swanson-Mungerson, M.	CGS	Microbiology & Immunology	Impact of Cyanobacteria LPS on Lung Inflammation
Vallejo-Elias, J.	CGS	Physiology	The Effects of APOE Isoforms on Caveolae Expression and Localization in the Hippocampus and Cerebral Cortex of Mice

Total CGS Intramural Funding: \$197,802

CHS-DG

Investigator/s	College	Department	Proposal Title
Dillon, T. & Elliott-Burke, T.	CHS-DG	Physical Therapy	Inter-device Reliability of Rehabilitative Ultrasound Imaging: Hand-held Device Versus Established Unit in Measuring Lumbar Multifidus Muscle Contraction
Evans, C.	CHS-DG	Physical Therapy	Patterns and Sources for Contamination in an Outpatient Physical Therapy Clinic
Helminski, J.	CHS-DG	Physical Therapy	High Intensity Training Status Improves Community Reentry in an Individual Post-Stroke
Helminski, J.	CHS-DG	Physical Therapy	Psychological Factors Associated with Success in an Entry-level Physical Therapy Program and on the National Physical Therapy Examination
Horton, R.	CHS-DG	Speech-Lanaguage Pathology	Teaching and Assessing Language Knowledge for Improved Literacy Outcomes (TALK-ILO)
Krzak, J.	CHS-DG	Physical Therapy	The Effect of Ankle Plantar Flexion Angle on Plantar Loading Characteristics During Amulation

Total CHS-DG Intramural Funding: \$22,729

INTRAMURAL FUNDING

CHS-GD

Investigator/s	College	Department	Proposal Title
Darban, N.	CHS-GD	Cardiovascular Science	Validating Effectiveness of Compatible Circuit Coatings by Measuring Beta-Thromboglobulin and Platelet Factor 4 as Biomarkers of Platelet Activation during Cardiopulmonary Bypass
Morrow, M.	CHS-GD	Nurse Anesthesia	Do External Factors Impact Self-addressed Competence in Female Certified Registered Nurse Anesthetists?
Rath, T.	CHS-GD	Cardiovascular Science	Microembolism Mitigation in the Cardiopulmonary Bypass Circuit
Scott, K.	CHS-GD	Physical Therapy	Effect of Anthropometric Characteristics, Elective Device Use, and Keyboard Use on Median Nerve Cross-Sectional Area

Total CHS-GD Intramural Funding: \$15,575

CPG

Investigator/s	College	Department	Proposal Title
Davis, L., Pogge, E., Storjohann, T., Early, N., Jones, M., El-Ibiary, S., Raney, E., Afolabi, T. & Larson S.	CPG	Pharmacy Practice	Assessing the Impact of Digital Behavior Change Interventions on Engagement Culminating in Advancement of Precepting Capabilities as Measured by the Habits of Preceptors-Rubric
Huang, V.	CPG	Pharmacy Practice	<i>In vitro</i> Activity of Ceftaroline Alone and in Combination with Daptomycin at High and Low Doses Against Methicillin-resistant <i>Staphylococcus aureus</i> in an <i>in vitro</i> Pharmacodynamic Model
Jordan, M.	CPG	Pharmaceutical Sciences	Efficacy of Cefovecin Sodium (Convenia) Stored Off-label in Veterinary Clinical Practice
Joshi, M.	CPG	Pharmaceutical Sciences	Establishment of an <i>In vitro</i> Model for Placental Transport and Evaluation of Transplacental Permeability of Vancomycin Loaded Liposomes Across
Olsen, M.	CPG	Pharmaceutical Sciences	Metabolic Stability of Deuterated Versus Non-Deuterated Drugs
Yao, M. & Elbayoumi, T.	CPG	Pharmaceutical Sciences	Antagonism of Thrombospondin 1-induced Pathologic Vascular Remodeling by Novel Recombinant CD47-based Pharmaceutical Formula

Total CPG Intramural Funding: \$48,300

CVM

Investigator/s	College	Department	Proposal Title
Jaffey, J.	CVM	Veterinary Medicine	Immunologic Effects of Oral 25-Hydroxyvitamin-D Supplementation in Healthy Dogs
Swartzendruber, J.	CVM	Veterinary Medicine	Role of Gap Junction Protein Connexin-43 in Lung Disease

Total CVM Intramural Funding: \$10,000

FACULTY SEED GRANT AWARDS

Investigator/s	Campus	Award	Proposal Title
Lopez, B.	Glendale	Seed Grant	Bovine Neonatal Dendritic Cell Function During <i>Cryptosporidium parvum</i> Infection
Mejía-Alvarez, R.	Downers Grove	Seed Grant	Functional Role of Inositol 1,4,5-triphosphate Receptor in the Pacemaker Activity of Mouse Sinoatrial Node

Total Multidisciplinary Intramural Funding: \$20,000

INTRAMURAL FUNDING

ONE HEALTH AND SEED GRANT RESEARCH AWARDS

Investigator/s	Campus	Award	Proposal Title
Pierre-Bez, A. Agostini, G. Obucina, L. Chamberlain, J. Jansen, K. London, L., Stein, A., & Mitchell, J.	Glendale	One Health	Interprofessional Approaches to the Management of Dental Anxiety in a University Dental Clinic
Pierce, M., Mayer, A. & Gerwick, W.	Downers Grove	One Health	High Throughput Screening of Marine Natural Products for Neuroactivity
Muldoon, K.	Glendale	Seed Grant	Paleontological Exploration of Regional Environmental Change in Northern Madagascar (Granted a 1-year Extension)

Total One Health Research Funding: \$30,000

IMPROVING HEALTHCARE DELIVERY AWARDS

Investigator/s	Campus	Award	Proposal Title
Agostini, G. & Pierre-Bez, A.	Glendale	Healthcare Delivery	Disparities in Disease Risk on the Frontlines: Do N95 Respirator Masks Protect our Diverse Healthcare Workforce and their Home Communities?
Chakraborty, A. & Suckow, M.	Downers Grove	Healthcare Delivery	Abnormal Visual Markers and Barriers in Eyecare Among African American Children
de Diego-Lázaro, B., Wolford, L., Smith, L. & Wolford, G.	Glendale	Healthcare Delivery	Intervention for Bilingual Children with Hearing Loss: Clinical and Educational Outcomes
Murray, M., Vega, L. (PGY-2), Harpe S., Marwaha, S. (CCOM '23) & Shah P. (CCP '21)	Downers Grove	Healthcare Delivery	Assessing the Relationship Between Health Literacy and Hospital Readmission in High Risk Patients
Potter, P., Ashurst, J. & Santarelli, A.	Glendale	Healthcare Delivery	Analysis of Factors Predicting Clinical Outcomes of COVID-19 Diagnosis Among Rural Minority Populations
Rocha de Oliveira Carrilho, M.	Downers Grove	Healthcare Delivery	Nurturing Oral Health Awareness Among Black Children Living in Food Deserts

Total Improving Health Delivery Intramural Funding: \$32,892

**TOTAL MWU INTRAMURAL FUNDING AWARDED BY ALL COLLEGES
DURING THIS REPORTING PERIOD: \$444,360**

FY21, 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	27.2	\$2,132,678
GLENDALE, ARIZONA	35.5	\$2,333,685
TOTAL	62.7	\$4,466,363

*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 \$4,466,363**

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 FY 2021, MWU spent \$913,728 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 FY21, MWU waived \$244,778 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 FY21, MWU paid out \$44,454 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.

FY21, QUARTER #4 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	1	\$25
TRAVEL TO PRESENT RESEARCH	4	\$340
FELLOWSHIPS#	46	\$214,250
TOTAL FUNDING IN SUPPORT OF STUDENT RESEARCH ACTIVITIES IN ILLINOIS		\$214,615

RESEARCH SUPPORT FOR STUDENTS IN GLENDALE, ARIZONA		
ACTIVITY	NUMBER OF AWARDS	TOTAL FUNDING
RESEARCH POSTER PRINTING	0	\$0
TRAVEL TO PRESENT RESEARCH	5	\$1,866
FELLOWSHIPS#	69	\$338,100
TOTAL FUNDING IN SUPPORT OF STUDENT RESEARCH ACTIVITIES IN ARIZONA		\$339,966

#Includes fellowships awarded in FY21, even though some payments are made in FY22.

ONE HEALTH STUDENT RESEARCH AWARDS

Investigator/s	Campus	Award	Proposal Title
Kerdjoudj, M. (CCOM '23)	Downers Grove	One Health	Characterization of Cornulin and DJ-1 as Biomarkers for the Progression of Oral Squamous Cell Carcinoma
Logue, M. (CVM '23)	Glendale	One Health	Evaluating the Roles of Strain-level Differences of <i>Rickettsia rickettsii</i> and Canine-based Factors on the Spread of Rocky Mountain Spotted Fever in Arizona and the Surrounding Region

TOTAL ONE HEALTH STUDENT RESEARCH FUNDING: \$5,000

**TOTAL FUNDING IN SUPPORT OF STUDENT RESEARCH ACTIVITIES
ACROSS BOTH CAMPUSES IS \$559,591**

THE ORSP WEBSITE CAN BE FOUND AT:

<https://www.midwestern.edu/departments/office-of-research-and-sponsored-programs.xml>

MWU FACULTY JOINT APPOINTMENTS

AZCOPT

Karen Baab
Nancy Bae
Thomas Broderick
Gerald Call
Dana Devine
Justin Georgi
Fernando Gonzalez

Aryeh Grossman
Wade Grow
Jose Hernandez
Lauritz Jensen
Garilyn Jentarra
T. Bucky Jones
Douglas Jones

Sam Katzif
Laszlo Kerecsen
Shaleen Korch
Kathryn Lawson
Andrew Lee
Kathryn Leyva
Pamela Potter

Michael Quinlan
Parveen Ranjan
Erin Simons
Heather Smith
Mark Swanson
Kathryn Townsend
Johana Vallejo-Elias

AZCOM

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Wade Grow
Margaret Hall
Jose Hernandez
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Chongwoo Kim
Shaleen Korch
Kathryn Lawson
Andrew Lee

Kathryn Leyva
Kathleen Muldoon
Christopher Olson
Pamela Potter
Michael Quinlan
Parveen Ranjan
Ann Revill
Tobias Riede
Minsub Shim
Erin Simons

Heather Smith
Mark Swanson
Kathryn Townsend
Tony Tullot
Johana Vallejo-Elias
John VandenBrooks
Gloria Yueh

AZCPM

T. Bucky Jones
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Kathleen Muldoon

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Michael Quinlan

Tony Tullot
Yir Gloria Yueh

CCO

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M. Swanson-Mungerson
Julie Swartzendruber
Martin Szul
Vaibhav Tiwari

Renier Velez-Cruz
Susan Viselli
Michael Volin
Gordon Wahler
James Woods

CCOM

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Kirk Dineley
Michael Fay
Michele Fornaro
Joanna Goral
Jacalyn Green
Kyle Henderson

Sandra Inouye
John Kasimos
Phillip Kopf
Richard Laddaga
Kathy LePard
Erin Leslie
Sean Lynch
Alejandro Mayer

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Balbina Plotkin
Maura Porta
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Ira Sigar
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CCP

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CGS

Mark Acierno
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Clemence Chako
Mae Ciancio
Alice Chapman
Tamer Elbayoumi
Christian Evans

Micahel Fay
Annette Gilchrist
Vanthida Huang
Melanie Jordan
Medha Joshi
Rachael Kreisler
Jung Keun Lee

Weidang Li
John Mitchell
Ashlesh Murthy
Ogi Okwumabua
Mark Olsen
Byron Russell
Marc Scheetz

Charles Veltri
Volkmar Weissig
Kathryn Wycislo
Mingyi Yao
Robin Zabod

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Sudhindra Gadagkar
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