

# **REPORT PERIOD** 7/1/12-6/30/13

# **REPORT CONTENTS:**

Proposals Submitted New Grants Funded Active Awards Publications Intramural Funding Research Technicians Recaptured Salary



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



# MIDWESTERN University

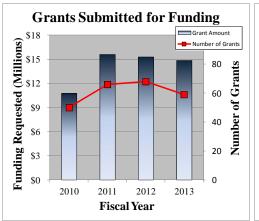
Educating Tomorrow's Healthcare Team

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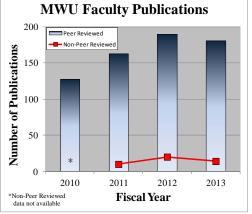
#### **OFFICE OF RESEARCH & SPONSORED PROGRAMS**

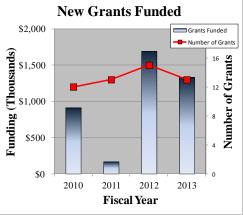


Midwestern University's (MWU's) Research Annual Report demonstrates research achievements of which members of the MWU community should be proud. As you will see inside this report, the total of all active extramural awards at MWU during this year has exceeded \$3.9 million. The front page graphs show some historical data over the last four 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.

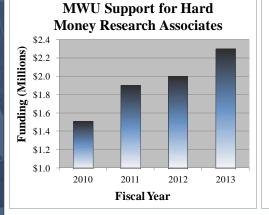


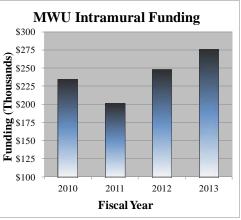
# Historical Research Activity Data





# Historical Research Support Data





# **AZCOM: SUBMITTED PROPOSALS**

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Alexander, L.	AZCOM	Physiology	Soluble Epoxide Hydrolase Inhibition and Renoprotection	06/16/2013	\$555,265	NIH-R03	4/1/2014
Al-Nakkash, L.	AZCOM	Physiology	Effects of Genistein on <i>In Vivo</i> and In Vitro Cardiac and Vascular Function in a VCD- treated Model for Menopause	1/29/2013	\$140,000	American Heart Association	7/1/2013
Al-Nakkash, L.	AZCOM	Physiology	Understanding Genistein's Role in Reducing Obesity and Intestinal Dysfunction in the ob/ ob Mouse Model of Type II Diabetes	3/15/2013	\$25,000	United Soybean Board	4/15/2013
Al-Nakkash, L.	AZCOM	Physiology	Can Genistein Protect Cardiac Function in a Novel Model of Menopause?	4/26/2013	\$25,000	Sarver Heart Center	7/1/2013
Al-Nakkash, L.	AZCOM	Physiology	Improving Intestinal Function in the ob/ob Mouse, a Model of Type II Diabetes	5/31/2013	\$40,000	Diabetes Action Research and Education Foundation	1/1/2014
Carlson, C.G.	AZCOM	Physiology	Downstream Consequences of ActRIIB Inhibition in Dystrophic (mdx) Muscle	2/25/2013	\$447,000	NIH-R15	9/1/2013
Carroll, C.	AZCOM	Physiology	Mechanisms Limiting Exercise Adaptations in Aging Human Tendon: An <i>In Vivo</i> Study	10/5/2012	\$1,665,470	NIH-RO1	7/1/2013
Carroll, C.	AZCOM	Physiology	Mechanisms of Pain Reduction in Vestibulodynia Patients Using Estradiol Cream	4/15/2013	\$28,181	National Vulvodynia Association	6/1/2013
Grossman, A.	AZCOM	Anatomy	Collaborative Research: New Paleontological Investigation of the Early Miocene Site of Loperot, South Turkana, Kenya	12/7/2012	\$153,820	NSF	8/1/2013
Hernandez, J.	AZCOM	Biochemistry	NF Cereals – Engineering N <sub>2</sub> Fixation in Mitochondria	3/1/2013	\$14,000	Bill & Melinda Gates Foundation subcontract with the Universidad Politecnica of Madrid, Spain	4/1/2013

# AZCOM (Continued)

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Jentarra, G.	AZCOM	Biochemistry	Neuron Structure and Plasticity in Young-adult APOE4 Carriers and Non-carriers	2/15/2013	\$44,700	Arizona Alzheimer's Consortium	7/1/2013
Kamilar, J.	AZCOM	Anatomy	The Evolution of Primate Hair Morphology: A Comparative Approach	7/15/2012	\$19,645	Leakey Foundation	1/1/2013
Kamilar, J.	AZCOM	Anatomy	Pattern and Process in Extant and Extinct Mammal Communities: A Macroecological Approach	4/1/2013	\$0 Effort will be Pro bono	NSF Collabora- tion with Arizona State University	2/1/2014
Kamilar, J.	AZCOM	Anatomy	The Evolution of Primate Hair Morphology: A Comparative Approach	11/1/2012	\$23,279	Wenner Gren Foundation	7/1/2013
Kaufman, J.	AZCOM	Anatomy	Imaging of Sports-Induced Neuropathology: MRI Correlates of SCI Severity	5/14/2013	\$40,228	NIH-R03 Subcontract with St. Joseph's Hospital & Medical Center	10/1/2013
Lee, A., Jentarra, G., Simons, E., Valla, J. & co- submitted with Buhlman, L. from CHS	AZCOM	Anatomy Biochemisty	MRI: Acquisition of a Core Confocal Laser Scanning Microscope for Research at Midwestern University, Glendale	2/21/2013	\$374,800	NSF	9/1/2013
Smith, H.	AZCOM	Anatomy	Evaluating Patterns of Ontogenetic Shape Variation in Catarrhine Primates	1/5/2013	\$18,604	Leakey Foundation	7/1/2013
Tarr, E.	AZCOM	Microbiology & Immunology	Dimensions: Tardigrade Defensins	5/6/2013	\$323,967	NSF	9/1/2013
Tarr, E.	AZCOM	Microbiology & Immunology	Free-living Models of Parasitic Protozoa	6/16/2013	\$111,750	NIH-R21	7/1/2014
Townsend, K.	AZCOM	Anatomy	Collaborative Research: Earth- Life Transitions, After the Bridgerian Crash-Mammalian Paleocommunities and Paleoecologies During the Middle Eocene of North America	2/22/2013	\$254,750	NSF	7/1/2013

### **AZCOM (Continued)**

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Valla, J.	AZCOM	Biochemistry	Menopause and Hormone Therapy: Learning, Memory, and Brain Sites of Action	6/16/2013	\$75,206	NIH-R21 Subcontract to Arizona State University	4/1/2014
Vallejo, J.	AZCOM	Physiology	Role of Caveolins in the Mechanisms Underlying Skeletal Muscle Insulin Resistance Induced by Fatty Acids and Tumor Necrosis Factor- $\alpha$	1/15/2013	\$99,995	American Diabetes Association	7/1/2013
Vallejo, J.	AZCOM	Physiology	Role of Caveolins and Sphingolipids in the Mechanism of Insulin Resistance	6/16/2013	\$444,648	NIH-R03	7/1/2014

# **Total of AZCOM Submitted Proposals: \$4,925,308**

# **AZCOPT: SUBMITTED PROPOSALS**

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Gaib, S. & Vasudevan, B.	AZCOPT	Optometry	Low Toric Soft Contact Lens Acceptance Study	10/22/2012	\$17,412	Contamac US, Inc.	12/1/2012
Kozlowski, M.	AZCOPT	Optometry	Anti-cell Proliferation Motif of Atrial Natriuretic Peptides as Anticancer Agents	8/5/2012	\$437,942	NIH-STTR Subcontract with Kalos Therapeu- tics, Inc.	4/1/2013
Kozlowski, M.	AZCOPT	Optometry	Retinal Pigment Epithelium (RPE) Cell Senescence <i>In Situ</i> and its Relationship to Age- related Macular Degeneration (AMD)	2/1/2013	\$20,000	Fight for Sight	7/1/2013
Sicks, L.	AZCOPT	Optometry	Teaching GP Contact Lens Concepts through DVD Modules	7/1/2012	\$2,380	Association of Schools and Colleges of Optometry	8/1/2012

**Total of AZCOPT Submitted Proposals: \$477,734** 

# **CCOM: SUBMITTED PROPOSALS**

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Bjork, B.	ССОМ	Biochemistry	Prdm16 and Mecom in Mouse Embryonic Mandible and Palate Development	2/25/2013	\$446,808	NIH-R15	9/1/2013
Edwards, J.	CCOM	Pharmacology	Cellular Mechanisms of Cadmium-induced Hyperglycemia and Hypoinsulinemia	10/5/2012	\$1,490,000	NIH-RO1	7/1/2013
Edwards, J.	CCOM	Pharmacology	Carcinogenic Effects of Cadmium in the Pancreas	1/25/2013	\$50,000	National Pancreas Foundation	8/1/2013
Edwards, J.	ССОМ	Pharmacology	Effect of Cadmium on Beta Cell Zinc Trafficking, Insulin Maturation and ER Stress	6/16/2013	\$18,154	NIH-R21 Subcontract to Northwestern University	4/1/2014
Heinking, K.	CCOM	Osteopathic Manipulative Medicine & Physiology	Use and Effectiveness of Osteopathic Manipulative Medicine in the Clinical Setting	5/20/2013	\$1,500	A.T. Still University/ A.T. Still Research Institute	5/20/2013
Heinking, K. & Henderson, K.	ССОМ	Osteopathic Manipulative Medicine & Physiology	Improving Osteopathic Postdoctoral Training with Basic Science and Osteopathic Manipulative Medicine Integration	2/28/2013	\$5,000	American Association of Colleges of Osteopathic Medicine	7/1/2013
Kopf, P.	CCOM	Pharmacology	The Role of 12- Lipoxygenase in Aldosterone Secretion	9/1/2012	\$60,000	PhRMA Foundation	1/1/2013
La Salle, S.	CCOM	Biochemistry	SPATA22 Function in Meiosis and Fertility	10/25/2012	\$444,800	NIH-R15	7/1/2013
Murthy, A.	ССОМ	Pathology	Mechanism(s) of CD8+T Cell -mediated <i>Chlamydia</i> - induced Reproductive Pathology	10/25/2012	\$459,396	NIH-R15	7/1/2013
Murthy, A.	CCOM	Pathology	Immunopathogenesis of <i>Chlamydia Pneumoniae</i> Mediated Atherosclerosis	1/28/2013	\$214,500	American Heart Midwest Affiliate	7/1/2013
Orr, C.	ССОМ	Anatomy	Comparative Morphological Analysis of the Hand and Wrist in Ardipithecus Ramidus and Miocene Hominoids	12/7/2012	\$110,247	NSF	9/1/2013
Peuler, J.	ССОМ	Pharmacology	Novel Interactions of Viagra with Vasorelaxations of Antidiabetic Agents	1/19/2013	\$142,924	American Heart Midwest Affiliate	7/1/2013

### **CCOM** (Continued)

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Plotkin, B.	CCOM	Microbiology & Immunology	Otitis Media-associated Biofilms: Activity of Novel Drugs on Moraxella Catarrhalis	12/14/2012	\$25,000	Hearing Health Foundation	7/1/2013
Ramsey, K.	CCOM	Microbiology & Immunology	Molecular Dissection of Plasmid-based Virulence in <i>Chlamydia</i>	10/5/2012	\$2,297,080	NIH-R01	7/1/2013

# **Total of CCOM Submitted Proposals: \$5,765,409**

# **CCP: SUBMITTED PROPOSALS**

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Gilchrist, A.	CCP	Pharmaceutical Sciences	Exploring FFAR2 and FFAR3 Ligand Biased G Protein Dependent/ Independent Signaling	6/25/2013	\$446,647	NIH-R15	4/1/2014
Gulati, A.	CCP	Pharmaceutical Sciences	Resuscitative Effect of Centhaquin in Hemorrhagic Shock	10/25/2012	\$447,000	NIH-R15	7/1/2013
Gulati, A.	CCP	Pharmaceutical Sciences	MP4OX in Cerebral Ischemia	3/1/2013	\$5,000	Sangart, Inc.	3/1/2013
Joshi, M.	ССР	Pharmaceutical Sciences	Targeted Delivery of ETB Receptor Agonist, IRL- 1620, in the Treatment of Cerebral Ischemia	9/17/2012	\$10,000	American Association of Colleges Pharmacy	1/1/2013
Lempicki, K.	ССР	Pharmacy Practice	Community Health Fair	8/3/2012	\$5,000	National Association of Chain Drug Stores Foundation	9/1/2012
Scheetz, M.	CCP	Pharmacy Practice	Patient Oriented Research on Hospital Acquired Pathogens	3/12/2013	\$36,580	NIH-K24 Subcontract with Northwestern University	4/1/2014
Scheetz, M.	CCP	Pharmacy Practice	Elucidation of an Informed Drug Dosing Scheme to Minimize Kidney Injury	6/25/2013	\$437,977	NIH-R15	4/1/2014
Venkatesan, N.	CCP	Pharmaceutical Sciences	Development of Delayed Release Dosage Form Resistant to Alcohol Induced Dose Dumping	9/17/2012	\$10,000	American Association of Colleges of Pharmacy	1/1/2013

# **Total of CCP Submitted Proposals: \$1,398,204**

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Cahill, S.	CHS	Occupational Therapy	Preparing Occupational Therapy Scholars to Work in School Mental Health	3/18/2013	\$1,194,902	U.S. Department of Education	11/1/2013
Jaskolski, J.	CHS	Speech Language Pathology	One SLP- Many Languages: A Resource Guide for SLPs	5/10/2013	\$11,078	American Speech- Language- Hearing Association	9/1/2013
Kristjansdottir, K.	CHS	Biomedical Sciences	The role of NPM1and its Interactome in Neuroblastoma	2/25/2013	\$100,000	American Cancer Society, Illinois Division	6/1/2013

# **CHS: SUBMITTED PROPOSALS**

# **Total of CHS Submitted Proposals \$1,305,980**

# **CPG: SUBMITTED PROPOSALS**

Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Abrams, J.	CPG	Pharmacy Practice	American Association of Colleges of Pharmacy Student Community Engaged Service Awards	8/20/2012	\$18,500	American Association of Colleges of Pharmacy	11/15/2012
Jordan, M.	CPG	Pharmaceutical Sciences	Novel Chia (Salvia hispanica) Oil-containing Lipidic Nanocarrier Adjuvants for Enhanced Delivery and Efficacy of the Anti-cancer Soy Flavonoid Genistein	1/13/2013	\$5,000	Herb Society of America, Inc.	5/1/2013
Olsen, M.	CPG	Pharmaceutical Sciences	Novel, Selective Modulators of Adaptation to Hypoxia	8/10/2012	\$798,279	NIH-RO1 Subcontract with Burke- Cornell Medical Research Institute	4/1/2013
Pogge, E.	CPG	Pharmacy Practice	A Pilot Program to Assess the Efficacy of Interprofessional Screening Events at a Retail Food Market	3/29/2013	\$4,535	American Association of Colleges of Pharmacy	6/1/2013

CPG	(Contin	ued)
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Investigator/s	College	Department	Proposal Title	Date Submitted	Total Budget	Agency	Start Date
Weissig, V.	CPG	Pharmaceutical Sciences	Nanoliposome Based Treatment of Amyloid (AL) Toxicity	10/5/2012	\$109,800	NIH-RO1 Subcontract with Phoenix VA	8/1/2013
Weissig, V.	CPG	Pharmaceutical Sciences	MitoBoost—Protecting the Future: Directed Mitochondrial Therapies to Prevent Metabolic Syndrome Trans-generational Bioenergetic Deficits	10/1/2012	Value of \$55,363	European Union	1/1/2013
Weissig, V.	CPG	Pharmaceutical Sciences	Nanoliposome Treatment and Inflammatory Mechanism of Vascular Dysfunction in Alzheimer's Disease	10/12/2012	\$38,391	American Health Assistance Foundation Subcontract with Phoenix VA	7/1/2013

# **Total of CPG Submitted Proposals: \$1,029,868**

# MWU SUBMITTED 59 PROPOSALS FROM ALL COLLEGES FOR FISCAL YEAR 2013: \$14,902,503

#### **MWU NEW EXTRAMURAL GRANTS FUNDED**

#### AZCOM

**Jose Hernandez, Ph.D., Department of Biochemistry** received a subaward from the Universidad Politecnica of Madrid, Spain on a grant funded by the Bill & Melinda Gates Foundation to support the project "NF Cereals - Engineering N<sub>2</sub> Fixation in Mitochondria" totaling \$14,000.

#### **Total New Extramural Funding Awarded to AZCOM: \$14,000**

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#### AZCOPT

**Lindsay A. Sicks, O.D., Department of Optometry** received a letter of award from the Association of Schools and Colleges of Optometry along with The Vision Care Institute, LLC, an affiliate of Johnson & Johnson for her project "Teaching GP Contact Lenses Concepts Through DVD Modules" totaling \$2,380.

**Sara Gaib, O.D., FAAO and Balamurali Vasudevan, Ph.D., Department of Optometry** have received funding from Contamac US, Inc. to support their project "Low Toric Soft Contact Lens Acceptance Study" totaling \$17,412.

#### Total New Extramural Funding Awarded to AZCOPT: \$19,792

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#### CCOM

**Kurt Heinking, D.O., FAAO, Department of Osteopathic Manipulative Medicine** was awarded an agreement from A.T. Still University/A.T. Still Research Institute for the project "Use and Effectiveness of Osteopathic Manipulative Medicine in the Clinical Setting" totaling \$1,500.

**Phillip Kopf, Ph.D., Department of Pharmacology** received a Research Starter Grant in Pharmacology/ Toxicology from the Pharmaceutical Research and Manufacturers of America Foundation for his project "The Role of 12-Lipoxygenase in Aldosterone Secretion" totaling \$60,000.

**Total New Extramural Funding Awarded to CCOM: \$61,500** 

CCP

Anil Gulati, M.D., Ph.D., Associate Dean received a grant agreement from the Alzheimer's Drug Discovery Foundation in the amount of \$96,694 to support his project "Nanocarrier formulation of ETB receptor agonist, IRL-1620, for the treatment of Alzheimer's disease."

#### **RESEARCH REPORT – MIDWESTERN UNIVERSITY-9**

# **MWU NEW EXTRAMURAL GRANTS FUNDED**

# **CCP** (Continued)

**Anil Gulati, M.D., Ph.D., Associate Dean** received an Investigator-Initiated Research Trial Agreement from Novo Nordisk, Inc. in the amount of \$53,191 to support his project "Effect of Liraglutide on oxidative stress and apoptosis in the brain of rats with focal cerebral ischemia."

Anil Gulati, M.D., Ph.D., Associate Dean received an agreement from Sangart, Inc. in the amount of \$5,000 to support his project MP4OX in Cerebral Ischemia.

**Anil Gulati, M.D., Ph.D., Associate Dean** received an agreement from Advocate Health and Hospitals Corporation to mentor, train and assist Pediatric Critical Care Medicine and Neonatal-Perinatal Medicine fellows in scholarly activity totaling \$81,000.

Total New Extramural Funding Awarded to CCP: \$235,885

#### CHS

**Danielle Kempton, M.M.S., PA-C, Physician Assistant Program** has received notice of award from the U.S. Department of Health Resources and Services Administration to support her project "Physician Assistant Training in Primary Care" totaling \$933,703.

**Karen Farrell, PsyD, Department of Behavioral Medicine** has received a grant agreement from the Illinois Violence Prevention Authority in the amount of \$15,000 for her project "StrongGirls/StrongBoys."

**Mae Ciancio, Ph.D., Biomedical Sciences Program** has received funding from the National Institutes of Health through the University of California, San Francisco Step-Up program in the amount of \$500 for research expenses for her mentorship participation.

### Total New Extramural Funding Awarded to CHS: \$949,203

# CPG

**Michael Dietrich, Pharm.D., BCPS, Department of Pharmacy Practice** has received notice of award from the National Association of Chain Drug Stores Foundation to support his project "Community Pharmacy Residency Expansion Project" totaling \$50,000.

Total New Extramural Funding Awarded to CPG: \$50,000

TOTAL MWU NEW EXTRAMURAL FUNDING AWARDED TO ALL COLLEGES IN THIS REPORT PERIOD: \$1,330,380

### AZCOM: ALL ACTIVE RESEARCH AWARDS DURING THE REPORTING PERIOD \*

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Al-Nakkash, L.	AZCOM	Physiology	Understanding the Mechanism for Genistein- Mediated Chloride Secretion	\$10,000	Soy Health Research Program	4/15/2011	Until Project Completion
Broderick, T.	AZCOM	Physiology	The Cardiac Oxytocin System in Diabesity	\$15,000	Diabetes Research and Action Education Foundation	1/1/2012	12/31/2012
Carlson, C. G.	AZCOM	Physiology	Preclinical Trials of NFkappaB Inhibition in the Treatment of Muscular Dystrophy	\$34,798	NIH-R15	04/03/2009	08/31/2013
Grossman, A.	AZCOM	Anatomy	New Paleontological Investigation as the Miocene Site of Loperot Turkana District, Kenya	\$20,000	The Leakey Foundation	5/10/2011	7/1/2013
Hernandez, J.	AZCOM	Biochemistry	NF Cereals-Engineering N <sub>2</sub> Fixation in Mitochondria	\$14,000	Bill & Melinda Gates Foundation subcontract with the Universidad Politecnica of Madrid, Spain	4/1/2013	12/31/2013
Kokjohn, T.	AZCOM	Microbiology & Immunology	App/Aβ/Tau Biochemistry in Transgenic Mice, Familial and Sporadic Alzheimer's Disease	\$20,000	NIH Subcontract with Banner Research Institute	5/10/2011	5/31/2014

# AZCOM Active Research Awards: \$113,798

# AZCOPT: ALL ACTIVE RESEARCH AWARDS DURING THE REPORTING PERIOD\*

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	Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
-	Gaib, S.; Vasudevan, B.	AZCOPT	Optometry	Low Toric Soft Contact Lens Acceptance Study	\$17,412	Contamac, US Inc.	12/1/2012	12/31/2013
7	Kozlowski, M.	AZCOPT	Optometry	Evaluation of ANP Analogs in a Model System for AMD	The Value of \$10,113	Kalos Therapeutics	3/5/2012	3/4/2013
	Sicks, L.	AZCOPT	Optometry	Teaching GP Contact Lenses Concepts Through DVD Modules	\$2,380	Association of Schools and Colleges of Optometry	8/1/2012	6/5/2013

# AZCOPT (Continued)\*

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Zinkovich, J.; Blacker, A.; Vasudevan, B.; Schatz, S.	AZCOPT	Optometry	Optical Technology: Advanced Optical Technology Applications	\$20,000	American Optometric Foundation	1/1/2011	12/31/2013

### **Total AZCOPT Active Research Awards: \$49,905**

# **CCOM: ALL ACTIVE RESEARCH AWARDS DURING THE REPORTING PERIOD\***

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Chandar, N.	CCOM	Biochemistry	Regulation of the p53 Gene During Osteoblast Differentiation	\$209,995	NIH-R15	9/1/2007	8/31/2012
Green, J.	CCOM	Biochemistry	Role of the abg Locus of E. coli in Folate Catabolism	\$211,141	NIH-R15	7/17/2009	6/30/2013
Heinking, K.	ССОМ	Osteopathic Manipulative Medicine	Use and Effectiveness of Osteopathic Manipulative Medicine in the Clinical Setting	\$1,500	A.T. Still University/A.T. Still Research Institute	5/20/2013	5/19/2014
Henderson, K.	ССОМ	Physiology	Thyroid Hormone Deiodinases in the Pathogenesis and Treatment for Heart Failure	\$217,668	American Heart Association	8/1/2011	12/31/2013
Henderson, K.	ССОМ	Physiology	Burn Trauma and Infection	\$12,479	DoD Subcontract with Loyola University	1/1/2012	7/31/2012
Kopf, P.	ССОМ	Pharmacology	The Role of 12- Lipoxygenase in Aldosterone Secretion	\$60,000	Pharmaceutical Research and Manufacturers of America Foundation	1/1/12013	12/31/2013
Murthy, A.	ССОМ	Pathology	Role of CD8 + T Cells in Reproductive Sequelae Induced by Chlamydia Infection	\$116,134	NIH-R03	10/1/2011	6/30/2013
Swanson- Mungerson, M.	ССОМ	Microbiology & Immunology	Functions of Epstein-Barr Virus LMP2A in Latency	\$219,000	NIH-R15	3/1/2012	2/18/2013

# CCOM (Continued)\*

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Tiwari, V.	ССОМ	Microbiology & Immunology	Structure-function Analysis of Zebrafish Encoded 3-OST Enzyme for HSV-1 Entry	\$363,742	NIH-R15	7/1/2011	12/31/2013
Volin, M.	CCOM	Microbiology & Immunology	Mucin Expression in Rheumatoid Arthritis	\$193,277	NIH-R15	8/17/2008	7/31/2012
Woods, J.	ССОМ	Microbiology & Immunology	Manzamine A as an Anti- Inflammatory Treatment for Rheumatoid Arthritis	\$212,820	NIH-R15	9/20/2009	9/29/2012

# Total CCOM Active Research Awards: \$1,817,756

# **CCP: ALL ACTIVE RESEARCH AWARDS DURING THE REPORTING PERIOD\***

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Gulati, A.	CCP	Pharmaceutical Sciences	Effect of Liraglutide on Permanent Middle Cerebral Artery Occlusion Stroke Model in Normal and Diabetic Rats	\$46,618	Novo Nordisk, Inc.	11/22/2010	Until Project completion
Gulati, A.	ССР	Pharmaceutical Sciences	Mentor, Train and Assist Pediatric Critical Care Medicine & Neonatal- Perinatal Medicine Fellows in Scholarly Activity	\$54,000	Advocate Health and Hospitals Corporation	1/1/2012	12/31/2012
Gulati, A.	CCP	Pharmaceutical Sciences	Nanocarrier Formulation of ETB Receptor Agonist, IRL-1620 for the Treatment of Alzheimer's Disease	\$96,694	Alzheimer's Drug Discovery Foundation	8/1/2012	7/31/2013
Gulati, A.	CCP	Pharmaceutical Sciences	Effect of Liraglutide on Oxidative Stress and Apoptosis in the Brain of Rats with Focal Cerebral Ischemia	\$53,191	Novo Nordisk, Inc.	12/1/2012	12/31/2013
Gulati, A.	CCP	Pharmaceutical Sciences	Mentor, Train and Assist Pediatric Critical Care Medicine & Neonatal- Perinatal Medicine Fellows in Scholarly Activity	\$81,000	Advocate Health and Hospitals Corporation	1/1/2013	12/31/2013

# CCP (Continued)\*

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Gulati, A.	CCP	Pharmaceutical Sciences	MP4OX in Cerebral Ischemia	\$5,000	Sangart, Inc.	1/1/2013	12/31/2013
Scheetz, M.	CCP	Pharmacy Practice	Quantifying the Magnitude of Clinical Virulence of KPC through Translational Study	\$10,000	Society of Infectious Disease	9/1/2011	8/31/2012
Schumacher, C.	CCP	Pharmacy Practice	A Collaborative Model to Improve BP Control and Minimize Racial Disparities	\$22,622	NIH Subcontract with the University of Iowa	3/1/2011	2/29/2013

# **Total CCP Active Research Awards: \$369,125**

# **CDMA: ALL ACTIVE RESEARCH AWARDS DURING THE REPORTING PERIOD\***

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Rolf, D.	CDMA	Dental	Dental Education Grant and Clinical Trials Agreement	The Value of \$485,851	Hiossen Inc.	12/15/2011	12/14/2016

# Total CDMA Active Research Awards: \$485,851

### **CHS: ALL ACTIVE RESEARCH AWARDS DURING THE REPORTING PERIOD\***

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Ciancio, M.	CHS	Biomedical Sciences	Step-Up Program	\$500	NIH through University of California, San Francisco	6/1/2012	8/31/2012

# CHS (Continued)\*

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Farrell, K.	CHS	Behavioral Medicine	StrongGirls/StrongBoys	\$26,650	Illinois Violence Prevention Authority	4/1/2011	6/30/2013
Hull, E.	CHS	Biomedical Sciences	Step-Up Program	\$500	NIH through University of California, San Francisco	6/1/2012	8/31/2012

# Total CHS Active Research Awards: \$27,650

# **CPG: ACTIVE RESEARCH AWARDS DURING THE REPORTING PERIOD\***

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Dietrich, M.	CPG	Pharmacy Practice	Community Pharmacy Residency Expansion Project	\$50,000	National Association of Chain Drug Stores Foundation	7/1/2012	6/30/2015

# Total CPG Active Research Awards: \$50,000

\*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 Active Research Awards: \$2,914,085** 

# ALL ACTIVE OTHER AWARDS DURING THE REPORTING PERIOD\*

Investigator/s	College	Department	Proposal Title	Total Award	Agency	Start Date	End Date
Kempton, D.	CHS	Physician Assistant	Physician Assistant Training in Primary Care	\$933,703	Health Resources and Services Administration	8/1/2012	7/31/2017
Piotrowski, K.	CHS	Nurse Anesthesia Program	Nurse Anesthetist Traineeships	\$23,460	Health Resources and Services Administration	7/1/2011	6/30/2013
Schalscha, A. (Riddle M., 2nd year Medical Student)	AZCOM	Clinical Education	Health Outreach through Medicine and Education	\$20,000	Association of American Medical Colleges	6/1/2009	5/31/2013
Speicher, M.	AZCOM	Dean's Office	Distance Learning Program for AZCOM students	\$17,835	The Pittsburgh Foundation	11/30/2011	11/30/2012

\*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.

<sup>§</sup>The numbers in this report do not include a \$1,531,960 grant submitted by Gregory J. Gaus, Sr. Vice President and Chief Financial Officer, and Susan Brassfield, Grant Specialist, that was awarded by the Illinois Board of Higher Education for Science Hall. MWU received these funds in fiscal year 2013.

**Total Active Other Awards: \$994,998** 

TOTAL MWU ACTIVE AWARDS: \$3,909,083

### AZCOM

\*Al-Nakkash L. (2012) Genistein stimulates jejungal chloride secretion via sex-dependent, estrogen receptor or adenylate cyclase mechanisms. *Cellular Physiology and Biochemistry* 30:137-150.

Al-Nakkash L. (2013) The Fifth annual meeting of the Arizona Physiological Society. *The Physiologist* 56 (1):8-10.

\*Al-Nakkash L, Martin JB, Petty D, Lynch SM, Hamrick C, Lucy D, Robinson J, Peterson A, Rubin LJ & Broderick TL. (2012) Dietary genistein induces sex-dependent effects on murine body weight, serum profiles, and vascular function of thoracic aortae. *Gender Medicine* 9:295-308. (*This work was prominently highlighted on the journal's cover.*)

\*Biwer LA, Broderick TL, Xu H, Carroll C & Hale TM. (2012) Protection against l-name induced reduction in cardiac output persists even after cessation of angiotensin converting enzyme inhibitor treatment. *Acta Physiologica (Oxf)* July 27:epub ahead of print.

\*Braggio E, Philipsborn C, Novak A, Hodge L, Ansell S & Fonseca R. (2012) Molecular pathogenesis of Waldenström's macroglobulinemia. *Haematologica* 97(9):epub ahead of print.

\*Brereton D, An D, Costas J & Simons ELR. (2012) The effects of glucocorticoid and voluntary exercise treatment on the development of thoracolumbar kyphosis in dystrophin-deficient mice. *Public Library of Science: Currents Muscular Dystrophy* Oct 10: *electronic only*.

\*Broderick TL, Parrott CR, Wang D, Jankowski M & Gutkowska J. (2012) Expression of cardiac gata4 and downstream genes after exercise training in the db/db mouse. *Pathophysiology* July 16:epub ahead of print.

\*Castano EM, Maarouf CL, Wu T, Leal MC, Whiteside CM, Lue LF, Kokjohn TA, Sabbagh MN, Beach TG & Roher AE. (2012) Alzheimer disease periventricular white matter lesions exhibit specific proteomic profile alterations. *Neurochemistry International* 62(2):145-156.

Call GB, Roy Puli O, James AM, Pope CR, Kango-Singh M & Singh A. (2012) Annual drosophila research conference. *Developmental Dynamics* 241(7):1227-1236.

\*Cooper N, Kamilar JM & Nunn CL. (2012) Host longevity and parasite species richness in mammals. *Public Library of Science One* 7(8):e42190.

\*Dawson AG, Heidari P, Gadagkar SR, Murray MJ & Call GB. (2013) An airtight approach to the inebriometer: From construction to application with volatile anesthetics. *Fly* (*Austin*) 7(2):epub ahead of print.

\*Dhamdhere KP, Bearse MA, Harrison WW, Barez S, Schneck ME & Adams AJ. (2012) Associations between local retinal thickness and function in early diabetes. *Investigative Ophthalmology and Vision Science* August:epub ahead of print.

Finch W. (2012) Failure is not an option (editorial). Federal Practitioner 29:7-8 electronic only.

\* Denotes Peer-Reviewed Publication

**RESEARCH REPORT – MIDWESTERN UNIVERSITY-17** 

### AZCOM (Continued)

\*Geetha T, Zheng C, Vishwaprakash N, Broderick TL & Babu JR. (2012) Sequestosome 1/p62, a scaffolding protein, is a newly identified partner of irs-1. *Journal of Biological Chemistry* July 3:epub ahead of print.

\*Georgi JA, Sipla JS & Forster CA. (2013) Turning semicircular canal function on its head: Dinosaurs and a novel vestibular analysis. *Public Library of Science One* 8(3):e58517.

\*Hall MI, Kamilar JM & Kirk EC. (2012) Eye shape and the nocturnal bottleneck of mammals. *Proceedings of the Royal Society/Biological Sciences* Oct 26:epub ahead of print.

\*Hunter JM, Kwan J, Malek-Ahmadi M, Maarouf CL, Kokjohn TA, Belden C, Sabbagh MN, Beach TG & Roher AE. (2012) Morphological and pathological evolution of the brain microcirculation in aging and Alzheimer's disease. *Public Library of Science One* 7(5):e36893.

\*Kamilar JM & Cooper N. (2013) Phylogenetic signal in primate behaviour, ecology and life history. *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences* 368 (1618):20120341.

\*Kamilar JM, Heesy CP & Bradley BJ. (2013) Did trichromatic color vision and red hair color coevolve in primates? *American Journal of Primatology* 75(7):740-51.

\*Kaufman JA, Turner GH, Holroyd PA, Rovero F & Grossman A. (2013) Brain volume of the newlydiscovered species *Rhynchocyon udzungwensis* (Mammalia: Afrotheria: Macroscelidea): implications for encephalization in sengis. *Public Library of Science One* 8(3):e58667.

\*Kokjohn TA, Maarouf CL, Daugs ID, Hunter JM, Whiteside CM, Malek-Ahmadi MN, Rodriguez E, Kalback W, Jacobson SA, Sabbagh MN, Beach TG & Roher AE. (2012) Neurochemical profile of dementia pugilistica. *Journal of Neurotrauma* Dec 28:epub ahead of print.

Korch SB, Stomel JM, Leon MA, Hamada MA, Stevenson CR, Simpson BW, Gujila SK & Chaput JC. (2012) ATP sequestration by a synthetic ATP-binding protein leads to novel phenotypic changes in *Escherichia coli*. *ACS Chemical Biology* Nov 28: epub ahead of print.

\*Lee AH, Huttenlocker AK, Padian K & Woodward HN. (2013) Analysis of growth rates. In K Padian & E-T Lamm (Eds.) *Bone Histology of Fossil Tetrapods: Advancing Methods, Analysis, and Interpretation*. (pp. 217-251). Berkley, CA: University of California Press.

\*Maarouf CL, Beach TG, Adler CH, Malek-Ahmadi M, Kokjohn TA, Dugger BN, Walker DG, Shill HA, Jacobson SA, Sabbagh MN, Roher AE & Arizona Parkinson's Disease Consortium. (2013) Quantitative appraisal of ventricular cerebrospinal fluid biomarkers in neuropathologically diagnosed Parkinson's disease cases lacking Alzheimer's disease pathology. *Biomark Insights* 8:19-28.

\* Denotes Peer-Reviewed Publication

### AZCOM (Continued)

\*Maarouf CL, Beach TG, Adler CH, Shill HA, Sabbagh MN, Wu T, Walker DG, Kokjohn TA, Roher AE & Arizona Parkinson Disease Consortium. (2012) Cerebrospinal fluid biomarkers of neuropathologically diagnosed Parkinson's disease subjects. *Neurological Research* 34(7):669-676.

\*Moore BA, Kamilar JM, Collin SP, Bininda-Emonds OR, Dominy NJ, Hall MI, Heesy CP, Johnsen S, Lisney TJ, Loew ER, Moritz G, Nava SS, Warrant E, Yopak KE & Fernandez-Juricic E. (2012) A novel method for comparative analysis of retinal specialization traits from topographic maps. *Journal of Vision* 12(12):13.

\*Pointer MA, Kamilar JM, Warmuth V, Chester SG, Delsuc F, Mundy NI, Asher RJ & Bradley BB. (2012) Runx2 tandem repeats and the evolution of facial length in placental mammals. *BMC Evolutionary Biology* 12 (1):103.

\* Potter PE. (2013) Curcumin: A natural substance with potential efficacy in Alzheimer's disease. *Journal of Experimental Pharmacology* 5(23-31).

\*Ramos JE, Al-Nakkash L, Peterson A, Gump BS, Janjulia T, Moore MS, Broderick TL & Carroll CC. (2012) The soy isoflavone genistein inhibits the reduction in achilles tendon collagen content induced by ovariectomy in rats. *Scandinavian Journal of Medicine and Science in Sports* 22(5):e108-114.

\*Rega EA, Noriega K, Sumida SS, Huttenlocker AK, Lee A & Kennedy B. (2012) Healed fractures in the neural spines of an associated skeleton of *dimetrodon*: Implications for dorsal sail morphology and function. *Fieldiana Life and Earth Sciences* 5:104-111.

\*Roher AE, Debbins JP, Malek-Ahmadi MN, Chen K, Pipe JG, Maze S, Belden C, Maarouf CL, Thiyyagura P, Mo H, Hunter JM, Kokjohn TA, Walker DG, Kruchowsky JC, Belohlavek M, Sabbagh MN & Beach TG. (2012) Cerebral blood flow in Alzheimer's disease. *Vascular Health and Risk Management* 8:599-611.

\*Smith HF, Parker W, Kotze SH & Laurin M. (2013) Multiple independent appearances of the cecal appendix in mammalian evolution and an investigation of related ecological and anatomical factors. *Comptes Rendus Palevol* Feb 7:epub ahead of print. (*Featured in Science's ScienceNOW, February 2013.*)

\*Tarr DEK. (2012) Nematode antimicrobial peptides. Invertebrate Survival Journal 9(1):122-133.

\*Tecot SR, Baden AL, Romine N & Kamilar JM. (2012) Reproductive strategies and infant care in the Malagasy primates. In K Clancy, K Hinde & J Rutherford (Eds.) *Building Babies: Proximate and Ultimate Perspectives of Primate Developmental Trajectories* (pp. 321-359). New York, NY: Springer.

\*Tecot SR, Baden AL, Romine N & Kamilar JM. (2012) Infant parking and nesting, not allomaternal care, influence Malagasy primate life histories. *Behavioral Ecology and Sociobiology* 66:1375-1386.

\*Trappe TA, Standley RA, Jemiolo B, Carroll CC & Trappe SW. (2013) Prostaglandin and myokine involvement in the cyclooxygenase-inhibiting drug enhancement of skeletal muscle adaptations to resistance exercise in older adults. *American Journal of Physiology. Regulatory, Integrative, and Comparative Physiology* 304(3): R198-205.

\* Denotes Peer-Reviewed Publication

**RESEARCH REPORT – MIDWESTERN UNIVERSITY-19** 

### **AZCOM** (Continued)

\*Wang W, Yang Y, Wang S, Nagaraj VJ, Liu Q, Wu J & Tao N. (2012) Label-free measuring and mapping of binding kinetics of membrane proteins in single living cells. *Nature Chemistry* 4(10):846-853.

\*Wolf AB, Braden BB, Bimonte-Nelson H, Kusne Y, Young N, Engler-Chiurazzi E, Garcia AN, Walker DG, Moses GS, Tran H, Laferla F, Lue L, Emerson Lombardo N & Valla J. (2012) Broad-based nutritional supplementation in 3xtg mice corrects mitochondrial function and indicates sex-specificity in response to Alzheimer's disease intervention. *Journal of Alzheimer's Disease* 32(1):217-232.

\*Wolf AB, Caselli RJ, Reiman EM & Valla J. (2013) APOE & neuroenergetics: an emerging paradigm in Alzheimer's disease. *Neurobiology of Aging* 34, 1007-1017.

\*Woodward HN, Padian K & Lee AH. (2013) Skeletochronology. In K Padian & E-T Lamm (Eds.) *Bone Histology of Fossil Tetrapods: Advancing Methods, Analysis, and Interpretation*. (pp. 195-215). Berkley, CA: University of California Press.

Worden K. (2012) Inability to turn head to the left in 10 week old infant. Cranial Newsletter 65(2):9-14.

#### AZCOPT

\*Harrison WW, Chang A, Cardenas MG, Bearse MA, Schneck ME, Barez S & Adams AJ. (2012) Blood pressure, vessel caliber, and retinal thickness in diabetes. *Optometry and Vision Science* 89(12):epub ahead of print.

\*Lin Z, Vasudevan B, Liang YB, Zhang YC, Zhao SQ, Yang XD, Wang NL, Gilmartin B & Ciuffreda KJ. (2013) Nearwork-induced transient myopia (NITM) in anisometropia. *Ophthalmic and Physiological Optics* May:epub ahead of print.

### CCOM

\*Ali MM, Karasneh GA, Jarding MJ, Tiwari V & Shukla D. (2012) A 3-o-sulfated heparan sulfate binding peptide preferentially targets herpes simplex virus 2-infected cells. *Journal of Virology* 86(12):6434-6443.

\*Antoine T, Mishra YK, Trigilio J, Tiwari V, Adelung R & Shukla D. (2012) Prophylactic, therapeutic and neutralizing effects of zinc oxide tetrapod structures against herpes simplex virus type-2 infection. *Antiviral Research* Oct 6:epub ahead of print.

\*Baldwin J, Antoine TE, Shukla D & Tiwari V. (2013) Zebrafish encoded 3-O-sulfotransferase-2 generated heparan sulfate serves as a receptor during HSV-1 entry and spread. *Biochemical and Biophysical Research Communications* 432(4):672-676.

\*Baldwin J, Park P, Zanotti B, Volin MV, Shukla D & Tiwari V. (2013). Susceptibility of human iris stromal cells to herpes simplex virus 1 (HSV-1) entry. *Journal of Virology* Jan 23:epub ahead of print.

\* Denotes Peer-Reviewed Publication

### **CCOM (Continued)**

\*Baldwin J, Shukla D & Tiwari V. (2013) Members of 3-O-sulfotransferases (3-OST) family: A valuable tool from zebrafish to humans for understanding herpes simplex virus entry. *Open Virology Journal* Jan 21:epub ahead of print.

\*Casoni F, Hutchins BI, Donohue D, Fornaro M, Condie BG & Wray S. (2012) SDF and GABA interact to regulate axophilic migration of GnRH neurons. *Journal of Cell Science* Sept 15:epub ahead of print.

\*Cellini J, Pommier R, Porter R & Lepard KJ. (2012) Enhanced nerve-stimulated muscarinic and neurokinin contractions of ileum from streptozotocin guinea-pigs. *Autonomic and Autacoid Pharmacology* 32(3 Pt 4):23-39.

\*Chamberlain ND, Vila OM, Volin MV, Volkov S, Pope RM, Swedler W, Mandelin AM & Shahrara S. (2012) Tlr5, a novel and unidentified inflammatory mediator in rheumatoid arthritis that correlates with disease activity score and joint TNF-alpha levels. *Journal of Immunology* 189(1):475-483.

\*Chen H, Reed G, Guardia J, Lakhan S, Couture O, Hays E & Chandar N. (2013) Vitamin D directly regulates Mdm2 gene expression in osteoblasts. *Biochemical Biophysical Research Communication* 430(1):370-374.

\*Czaja K, Fornaro M & Geuna S. (2012) Neurogenesis in the adult peripheral nervous system. *Neural Regeneration Research* 7(14):1047-1054.

\*Escobar AL, Perez CG, Reyes ME, Lucero SG, Kornyeyev D, Mejia-Alvarez R & Ramos-Franco J. (2012) Role of inositol 1,4,5-trisphosphate in the regulation of ventricular Ca(2+) signaling in intact mouse heart. *Journal of Molecular and Cellular Cardiology* Aug 31:epub ahead of print.

\*Green DJ & Alemseged Z. (2012) Australopithecus afarensis scapular ontogeny, function, and the role of climbing in human evolution. *Science* 338(6106):514-517.

\*Green DJ, Richmond BG & Miran SL. (2012) Mouse shoulder morphology responds to locomotor activity and the kinematic differences of climbing and running. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution* August 20:epub ahead of print.

\*Green JM. (2012) Glucarpidase to combat toxic levels of methotrexate in patients. *Therapeutics and Clinical Risk Management* 8:403-413.

\*Hubbard S, Choudhary S, Maus E, Shukla D, Swenson S, Markland FS, Jr. & Tiwari V. (2012) Contortrostatin, a homodimeric disintegrin isolated from snake venom inhibits herpes simplex virus entry and cell fusion. *Antiviral Therapy* 17:1319-1326.

\*Incrocci R, McCormack M & Swanson-Mungerson M. (2013) Epstein-Barr Virus LMP2A increases IL-10 production in mitogen-stimulated primary B cells and B cell lymphomas. *Journal of General Virology* Jan 9:epub ahead of print.

#### **PUBLICATIONS**

#### **CCOM** (Continued)

\*Kamalakaran S, Chaganty BK, Gupta R, Guentzel MN, Chambers JP, Murthy AK & Arulanandam BP. (2013) Vaginal chlamydial clearance following primary or secondary infection in mice occurs independently of TNFalpha. *Frontiers in Cellular and Infection Microbiology* 3(11):1-7.

\*Kirby DT, Raino CJ, Rabor Jr. SF, Wasson CJ & Plotkin BJ. (2012) Semi-automated method for multitasking measurement of microbial growth, capsule, and biofilm formation. *Advances in Microbiology* 2(4):623-628.

\*LePard KJ & Cellini J. (2013) Age-dependent slowing of enteric axonal transport in insulin-resistant mice. *World Journal of Gastroenterology* 19(4): 482-491.

\*Manam S, Nicholson BJ & Murthy AK. (2013) OT-1 mice display minimal upper genital tract pathology following primary intravaginal *Chlamydia muridarum* infection. *Pathogens and Disease* Mar 11:epub ahead of print.

\*Murthy AK, Arulanandam BP & Guangming Z. (2012) *Chlamydia* Vaccine: Progress and Challenges. In M. Tan & P Bavoil (Eds.) *Intracellular Pathogens I: Chlamydiales* (pp. 312-334) Washington, DC: ASM Press.

\*Oki K, Kopf PG, Campbell WB, Luis Lam M, Yamazaki T, Gomez-Sanchez CE & Gomez-Sanchez EP. (2013) Angiotensin II and III metabolism and effects on steroid production in the HAC15 human adrenocortical cell line. *Endocrinology* 154(1):214-221.

\*Orr CM, Tocheri MW, Burnett SE, Due Awe R, Saptomo W, Sutikna T, Jatmiko, Wasisto S, Morwood MJ & JungersWL. (2013) New wrist bones from *Homo floresiensis* (Liang Bua, Flores). *Journal of Human Evolution* 64(2):109-129.

\*Pickens SR, Chamberlain ND, Volin MV, Pope RM, Talarico NE, Mandelin AM, 2nd & Shahrara S. (2012) Role of the CCL21 and CCR7 pathways in rheumatoid arthritis angiogenesis. *Arthritis and Rheumatism* 64 (8):2471-2481.

\*Poustinchian BR & Pohlman DJ. (2012) Erythema ab igne. *Journal of the American Osteopathic Association* 112(12):808.

\*Prerost FJ. (2012) Behavioral Therapies for Addiction. In RK Montvilo (Ed.) *Salem Health: Addictions and Substance Abuse*. (pp.96-99). Ipswich, MA: Salem Press.

\*Prerost FJ. (2012) DSM-IV Criteria for Behavioral Addictions. In RK Montvilo (Ed.) Salem Health: Addictions and Substance Abuse. (pp.198-201). Ipswich, MA: Salem Press.

\*Prerost F & Song S. (2012) Bipolar spectrum disorders and self-concept among males and females with parenting roles. *Psychology* 3(4):364-369.

\*Prerost FJ & Song S. (2013) Child Sexual Abuse. In AC Michalos (Ed.) *Encyclopedia of Quality of Life Research*. (pp.125-128). Dordrecht, Netherlands: Springer Science+Business Media.

\* Denotes Peer-Reviewed Publication

**RESEARCH REPORT – MIDWESTERN UNIVERSITY-22** 

### **CCOM** (Continued)

\*Prozialeck WC & Edwards JR. (2012) Mechanisms of cadmium-induced proximal tubule injury: New insights with implications for biomonitoring and therapeutic interventions. *Journal of Pharmacology and Experimental Therapeutics* June 5:epub ahead of print. (*This work is prominently highlighted in the Perspective in Pharmacology section of the journal.*)

\*Prozialeck WC, Jivan JK & Andurkar SV. (2012) Pharmacology of kratom: an emerging botanical agent with stimulant, analgesic and opioid-like effects. *Journal of the American Osteopathic Association* 112(12):792-799.

\*Ronchi G, Ryu V, Fornaro M & Czaja K. (2012) Hippocampal plasticity after a vagus nerve injury in the rat. *Neural Regeneration Research* 7(14):1055-1063.

\*Shukla ND, Tiwari V & Valyi Nagy T. (2012) Nectin-1 specific entry of herpes simplex virus-1 may be sufficient for infection in the cornea and spread to the trigeminal ganglia. *Molecular Vision* 18:2711-2716.

\*Singleton M. (2012) Postnatal cranial development in papionin primates: An alternative model for hominin evolutionary development. *Evolutionary Biology* Jan 7:epub ahead of print.

\*Tiwari V, Maus E, Sigar IM, Ramsey KH & Shukla D. (2012) Role of heparan sulfate in sexually transmitted infections. *Glycobiology* July 6:epub ahead of print.

\*Van Winkle LJ, Chandar N, Cornell S, Fjortoft N, Green JM, La Salle S, Lynch SM, Viselli SM & Burdick P. (2012) Interprofessional workshop to improve mutual understanding between pharmacy and medical students. *American Journal of Pharmaceutical Education* 76(8):Article 150.

\*Van Winkle LJ, La Salle S, Richardson L, Bjork BC, Burdick P, Chandar N, Green JM, Lynch SM, Robson C & Viselli SM. (2013) Challenging medical students to confront their biases: A case study simulation approach. Medical Science Educator 23(2):217-224.

\*Winkel E, Sabin A & Mejia-Alvarez R. (2012) Cushingoid lipodystrophy can be prevented by thiazolidinediones. *Endocrine* July 17:epub ahead of print.

#### CCP

\*Arif SA, Gim S, Nogid A & Shah B. (2012) Journal clubs during advanced pharmacy practice experiences to teach literature-evaluation skills. *American Journal of Pharmaceutical Education* 76(5):88.

\*Asteriti S, Daniele S, Porchia F, Dell' Anno M, Fazzini A, Pugliesi I, Trincavelli M, Taliani S, Martini C, Mazzoni M & Gilchrist A. (2012) Modulation of par(1) signalling by benzimidazole compounds. *British Journal of Pharmacology* 167(1):80-89.

\*Bhalla S, Ali I, Lee H, Andurkar SV & Gulati A. (2012) Potentiation of oxycodone antinociception in mice by agmatine and BMS182874 via an imidazoline I(2) receptor-mediated mechanism. *Pharmacology, Biochemistry and Behavior* Oct 26:epub ahead of print.

### **CCP** (Continued)

\*Bhalla S, Andurkar SV & Gulati A. (2012) Involvement of alpha(2)-adrenoceptors, imidazoline, and endothelin-a receptors in the effect of agmatine on morphine and oxycodone-induced hypothermia in mice. *Fundamental and Clinical Pharmacology* May 15:epub ahead of print.

\*Chopra S, Venkatesan N & Betageri GV. (2013) Formulation of lipid bearing pellets as a delivery system for poorly soluble drugs. *International Journal of Pharmaceutics* 446 (1-2):136-144.

\*Cornell S. (2012) Differentiating among incretin therapies: A multiple-target approach to type 2 diabetes. *Journal of Clinical Pharmacy and Therapeutics* 37(5):510-524.

\*Cornell S. (2012) Key considerations in pharmacotherapy for type 2 diabetes mellitus: A multiple target organ approach. *Journal of Clinical Pharmacy and Therapeutics* 37(3):254-259.

\*Cornell S & Dorsey VJ. (2012) Diabetes pharmacotherapy in 2012: Considerations in medication selection. *Postgraduate Medicine* 124(4):84-94. (*This work was prominently highlighted on the journal's cover.*)

\*Esterly JS, Wagner J, McLaughlin MM, Postelnick MJ, Qi C & Scheetz MH. (2012) Evaluation of clinical outcomes in patients with bloodstream infections due to gram-negative bacteria according to carbapenem MIC stratification. *Antimicrobial Agents and Chemotherapy* 56(9):4885-4890.

\*Geng H, Lan R, Singha PK, Gilchrist A, Weinreb PH, Violette SM, Weinberg JM, Saikumar P & Venkatachalam MA. (2012) Lysophosphatidic acid increases proximal tubule cell secretion of profibrotic cytokines PDGF-B and CTGF through LPA2- and Galphaq-mediated rho and alphavbeta6 integrin-dependent activation of TGF-beta. *American Journal of Pathology* 181(4):1236-1249.

\*Gettig JP. (2013) Application Process – The Holiday Rush. In PB Bookstaver et al., (Eds.) *Roadmap to Post*graduate Training in Pharmacy. (pp. 139-161). NY: The McGraw Hill Companies, Inc.

\*Gilchrist A. (2012) Are we just learning the scales on the chemokine receptor pianos? *Future Medicinal Chemistry* 4(7):825-827.

\*Gonzalzles TM, Suseno M, Gaydos JM, Schreckenberger PC, Sincak C, Mehta MS & Peterson LR. (2012) Assessment of susceptibility, pharmacodynamics, and therapeutic response for interpretation of piperacillintazobactam *in vitro* activity in the treatment of *Pseudomonas aeruginosa* infection. *The Open Journal of Medical Microbiology* 2(3):101-109.

\*Griffith MM, Patel JA, Sutton SH, Bolon MK, Esterly JS, Gross AE, Postelnick MJ, Zembower TR & Scheetz MH. (2012) Prospective approach to managing antimicrobial drug shortages. *Infection Control and Hospital Epidemiology* 33(7):745-752.

\*Griffith MM, Pentoney Z & Scheetz MH. (2012) Antimicrobial drug shortages: A crisis amidst the epidemic and the need for antimicrobial stewardship efforts to lessen the effects. *Pharmacotherapy* June 30:epub ahead of print.

### **CCP** (Continued)

Hieber R. (2013) Surviving post traumatic stress disorder. Mental Health Clinician 2(7):14.

Hieber R. (2013) PTSD toolbox. Mental Health Clinician 2(7):25.

Joshi M. (2012) Invited to write research highlights from the latest articles in *Nanomedicine, Future Medicine Ltd* 8(2):1-3.

\*Joshi M, Unger WJ, Storn G, van Kooyk Y & Mastrobattista E. (2012) Targeting tumor antigens to dendritic cells using particulate carriers. *Journal of Controlled Release* 161(1):25-37.

\*Lee M & Sharifi R. (2013) Benign prostatic hyperplasia. In Chisolm-Burns M, Wells B, Schwinghammer T, et al (Eds.) *Pharmacotherapy Principles & Practice*, *3rd ed*. (pp. 927-942). New York, NY: McGraw-Hill/ Medical Publishing Division.

\*McLaughlin M, Malczynski M, Qi C, Radetski J, Zembower T & Scheetz MH. (2012) Temporal changes in pulsed-field gel electrophoresis banding in vancomycin-resistant enterococcus faecium and implications for outbreak investigations. *American Journal of Infection Control* Oct 24:epub ahead of print.

\*Mehendale R, Joshi M & Patravale V. (2012) Nanomedicines for treatment of viral diseases. *Critical Reviews*<sup>TM</sup> *in Therapeutic Drug Carrier Systems* 29(2):149-182.

\*Merritt JR & Gilchrist A. (2012) CCR1. In JI Levin & S Laufer (Eds.) *Anti-Inflammatory Drug Discovery* (pp.329-349). Cambridge, UK: RSC Publishing.

\*Murphy JE & Lee M. (Eds.)(2013) *Pharmacotherapy self assessment program 2013: Book 1 cardiology/ endocrinology*. Lenexa, KS: American College of Clinical Pharmacy.

\*Patel J, Esterly JS, Scheetz MH, Bolon MK & Postelnick MJ. (2012) Effective use of a clinical decisionsupport system to advance antimicrobial stewardship. *American Journal of Health-System Pharmacy* 69 (18):1543-1544.

\*Patel JA, Esterly JS, Scheetz MH & Postelnick MJ. (2012) An analysis of the accuracy of physician-entered indications on computerized antimicrobial orders. *Infection Control and Hospital Epidemiology* 33(10):1066-1067.

\*Patil S, Joshi M, Pathak S, Sharma S & Patravale V. (2012) Intravenous b-artemther formulation (arm-nlc) as a superior alternative to commercial artesunate formulation. *Journal of Antimicrobial Chemotherapy* August 16:epub ahead of print.

\*Phillips JA, Gabay MP, Ficzere C & Ward KE. (2012) Curriculum and instructional methods for drug information, literature evaluation, and biostatistics: Survey of US pharmacy schools. *Annals of Pharmacotherapy* 46(6):793-801.

#### **CCP** (Continued)

\*Prabhu P, Patravale V & Joshi M. (2012) Nanocarriers for effective topical delivery of anti-infectives. *Current Nanoscience* 8:491-503.

\*Rubin RF, Kuttab HM, Rihani RS & Reutzel TJ. (2012) Patient adherence to three dose completion of quadrivalent human papillomavirus (HPV) vaccine in a private practice. *Journal of Community Health* June:epub ahead of print.

\*Schumacher, C. (2012). Pharmacist involvement in a patient-centered medical home. *Pharmacy Practice Model Initiative: Case Studies* retrieved on November 20<sup>th</sup> from http://www.ashpmedia.org/ppmi/docs/ casestudy-Midwestern.pdf.

\*Sease J, Cornell S, Shealy K & Johnson JT. (2013) Diabetes. In M Chisholm-Burns, TL Schwinghammer, BG Wells, PM Malone, JM Kolesar & JT Dipiro. (Eds.) 3<sup>rd</sup> ed. *Pharmacotherapy: Principles and Practice*. (pp. 757-786) NY: McGraw Hill.

\*Sushant P, Medha J, Sulabha P, Shobhona S & Vandana P. (2012) Intravenous beta artemether formulation (ARM NLC) as a superior alternative to commercial artesunate formulation. *Journal of Antimicrobial Chemotherapy* 67 (11):2713-2716.

\*Taylor AK, Zembower TR, Nadler RB, Scheetz MH, Cashy JP, Bowen D, Murphy AB, Dielubanza E & Schaeffer AJ. (2012) Targeted antimicrobial prophylaxis using rectal swab cultures in men undergoing transrectal ultrasound guided prostate biopsy is associated with reduced incidence of postoperative infectious complications and cost of care. *Journal of Urology* 187(4):1275-1279.

\*Trewet CB & Fjortoft NF. (2013) Evaluation of the impact of a continuing professional development worksheet on sustained learning and implementing change after a continuing pharmacy education activity. *Research in Social and Administrative Pharmacy* 9(2):215-221.

\*Trifilio SM, Scheetz M, Borensztajn J & Mehta J. (2012) Variability of cyclosporine concentrations by HPLC and TDX monoclonal assay methods, application of a correction factor, and description of a novel clinical approach to determine the practical consequences of changing assay technique. *Clinical Transplantation* Oct 29:epub ahead of print.

\*Unger WW, van Beelen AJ, Bruijns SC, Joshi M, Fehres CM, van Bloois L, Verstege MI, Ambrosini M, Kalay H, Nazmi K, Bolscher JG, Hooijberg E, de Gruijl TD, Storm G & van Kooyk Y. (2012) Glycanmodified liposomes boost cd4(+) and cd8(+) t-cell responses by targeting dc-sign on dendritic cells. *Journal of Controlled Release* 160(1):88-95.

#### **CDMA**

\*Marya CM, Sharma G, Parashar VP & Dahiya V. (2012) Mucosal fixed drug eruption in a patient treated with ornidazole. *Journal of Dermatological Case Reports* 6(1):21-24.

#### **CDMA** (Continued)

\*Parashar V, Whaites E, Monsour P, Chaudhry J & Geist JR. (2012) Cone beam computed tomography in dental education: A survey of U.S., U.K., and Australian dental schools. *Journal of Dental Education* 76 (11):1443-1447.

#### CDMI

\*Bahcall J. (2013) Remedying endodontic file breakage. *Compendium of Continuing Education in Dentistry* 34 (5):2-5.

\*Bueno AC, Ferreira RC, Barbosa FI, Jham BC, Magalhaes CS & Moreira AN. (2013) Periodontal care in patients undergoing radiotherapy for head and neck cancer. *Supportive Care in Cancer* 21(4):969-975.

Cai Q, Subramani S, Mathew R & Yang X. (2012) Carbon nanomaterials for implant dentistry and bone tissue engineering. In K Subramani, W Ahmed & J Hartsfield, Jr. (Eds.) *Nanomaterials in Clinical Dentistry, 1st ed.* (pp. 359-388). London, UK: Elsevier.

\*Chi CC WS, Peters MC, Kanjirath PP, Delamere FM & Wojnarowska F. (2012) Interventions for prevention of herpes simplex labialis (cold sores on the lips) (protocol). *Cochrane Database of Systematic Reviews* 9 (CD010095).

\*de Carvalho Fraga CA, Alves LR, de Sousa AA, de Jesus SF, Vilela DN, Pereira CS, Batista Domingos PL, Viana AG, Jham BC, Batista de Paula AM & Sena Guimaraes AL. (2013) Th1 and Th2-like protein balance in human inflammatory radicular cysts and periapical granulomas. *Journal of Endodontics* 39(4):453-455.

\* Haddock CK, Jahnke SA, Poston WSC & Williams LN. (2013) Cigarette Prices in Military Retail: A Review and Proposal for Advancing Military Health Policy. *Military Medicine* 178(7):563-569.

\*Marquez IC. (2013) How do I manage a patient with periodontal abscess? *Journal of the Canadian Dental Association* 79(1):49-50.

\*Omami G, Mathew R, Gianoli D & Lurie A. (2012) Enormous aneurysmal bone cyst of the mandible: Case report and radiologic-pathologic correlation. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology* 114(1):e75-79.

\*Rivera H, Bastidas A & Jham BC. (2013) Clear cell odontogenic carcinoma: a case report with immunohistochemical study and comprehensive literature review. *Gazzetta Medica Italiana* 172(4): 297-301.

\*Scheper MA, Duarte EC, Intapa C, Zhang M, Nascimento LM, Almeida TP, Gomes AC, Song S, Chaisuparat R, Batista AC & Jham BC. (2012) Expression of midkine in ameloblastomas and its correlation with clinicopathologic parameters. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology* 114(4):497-502.

#### CHS

\*Anderson DK. (2013) Case study: Development coordination disorder. In SK Effgen (Ed.) *Meeting the physical therapy needs of children, 2nd ed.* (pp.721-738). Philadelphia, PA: F.A. Davis Company.

\*Anderson D & Burns S. (2013) One minute paper: Student assessment perception of learning gains. *College Student Journal* 47(1):219-227.

\*Anderson DK & Irwin KE. (2013) Self-assessment of professionalism in physical therapy education. *Work* 44 (3):275-281.

Andersson E, Hyatt A-C & Leinsköld G. (2012) *Sensory processing measure. Manual supplement. Swedish version.* Stockholm, Sweden: Hogrefe Psykologiforlaget.

\*Bazyk S, Berthelette M, Cahill S, Frolek Clark G, Csanyi C, McCloskey S, McGuire B, Ivey C, Jackson L, Kane E, Olson L, Polochino J, Ray S, Sanchez S, Schoonover J, Nanof T & Schefkind S. (2012) American Occupational Therapy Association Practice Advisory on Occupational Therapy in Response to Intervention *American Occupational Therapy Association*, <a href="http://www.aota.org">http://www.aota.org</a>, accessed on June 28, 2013.

\*Burns S. (2012) Patient warming's role in preventing SSI's. Outpatient Surgery 13(9):62-67.

Cahill S. (2012) Exploring new territories in the schools. *Intervention and School Special Interest Section Quarterly* 19(3):1-3.

\*Cech DJ. (2013) Case Study: Cerebral Palsy. In SK Effgen (Ed.) *Meeting the Physical Therapy Needs of Children, 2nd ed.* (pp. 637-654). Philadelphia, PA: F.A. Davis Company.

\*Coplan B, Cawley J & Stoehr J. (2013) Physician assistants in primary care: trends and characteristics. *The Annals of Family Medicine* 11(1):75-79.

\*Evans CC & Brooks G. (2012) Electrocardiogram Interpretation. In D Frownfelter & E Dean (Eds.) *Cardiovascular and Pulmonary Physical Therapy, Evidence and Practice, 5th ed.* (pp.158-174). St. Louis, MO: Mosby-Elsevier.

\*Evans CC & Conroy C. (2012) Management of patients with type II diabetes residing at a homeless shelter: A series of case reports. *Journal of Physical Therapy* 6(1):3-12.

\*Evans CC, Hanke TA, Zielke D, Keller S & Ruroede K. (2012) Monitoring community mobility with global positioning system technology after a stroke: A case study. *Journal of Neurologic Physical Therapy* 36(2):68-78. (*This work was prominently highlighted on the journal's cover.*)

\*Gollan JK, Hoxha D & Getch S. (2013) Affective information processing in pregnancy and postpartum with and without major depression. *Psychiatry Research* Jan 19:epub ahead of print.

### **CHS** (Continued)

\*Hamera E, Brown C & Goetz J. (2013) Objective and subjective sleep disturbances in individuals with psychiatric disabilities. *Issues in Mental Health Nursing 34*:110-116.

\*Hodge AB, Snyder AC, Fernandez AL, Boan AD, Malek AM & Sistino JJ. (2012) The effect of acute sleep deprivation and fatigue in cardiovascular perfusion students: A mixed methods study. *The Journal of Extra-Corporeal Technology* 44(3):116-125.

\*Jenkins D. (2012) Exercise and diabetes: An update. Podiatry Management 31(9):95-100 electronic only.

\*Kayingo GAJ, Najera DB, Olmedo B, Watt D, Essary AC, Leger MM & McNellis R. (2012) Sickle cell disease: What every PA should know. *Journal of the American Academy of Physician Assistants* 25(9):19-20.

\* Knecht-Sabres L. (2013) Experiential learning in occupational therapy: Can it enhance readiness for clinical practice? *Journal of Experiential Education* 36(1):22-36.

\*Loeben, G. (2012) Medical futility. In: eLS. Chichester, United Kingdom: John Wiley & Sons, Ltd. doi:10.1002/9780470015902.a0003476.pub2.

\*Marciniak CM, Harvey RL, Gagnon CM, Duraski SA, Denby FA, McCarty S, Bravi LA, Polo KM & Fierstein KM. (2012) Does botulinum toxin type A decrease pain and lessen disability in hemiplegic survivors of stroke with shoulder pain and spasticity?: A randomized, double-blind, placebo-controlled trial. *American Journal of Physical Medicine & Rehabilitation* 12 (91):1007–1019. (*This work was prominently highlighted on the journal's cover.*)

\*Myers KW, Capek D, Shill H & Sabbagh M. (2013) Aquatic Therapy and Alzheimer's Disease. Annals of Long Term Care 21 (5):36-41. (This work was prominently highlighted on the journal's cover.)

\*Neely KA, Planetta PJ, Prodoehl J, Corcos DM, Comella CL, Goetz CG, Shannon KL & Vaillancourt DE. (2013) Force control deficits in individuals with Parkinson's disease, multiple systems atrophy, and progressive supranuclear palsy. *Public Library of Science One* 8(3):e58403.

\*Noronha S & Sawyer S. (2013) Chronic myeloid leukemia: Advances in Diagnosis and Management. *Journal of the American Academy of Physician Assistants* 2(26):26-29.

\*Prodoehl J, Li H, Planetta PJ, Goetz CG, Shannon KM, Tangonan R, Comella CL, Simuni T, Zhou XJ, Leurgans S, Corcos DM & Vaillancourt DE. (2013) Diffusion tensor imaging of Parkinson's disease, atypical Parkinsonism, and essential tremor. *Movement Disorders* May 16:epub ahead of print.

\*Prodoehl J, Planetta PJ, Kurani AS, Comella CL, Corcos DM & Vaillancourt DE. (2013) Differences in brain activation between tremor- and nontremor-dominant Parkinson disease. *The Journal of the American Medical Association: Neurology* 70(1):100-106.

\*Richardson L. (2013) Communicating concerns about nonspecific changes on ECG. Clinical Advisor Jan 10.

\* Denotes Peer-Reviewed Publication

**RESEARCH REPORT – MIDWESTERN UNIVERSITY–29** 

#### **CHS** (Continued)

\*Soby SD, Gadagkar SR, Contreras C & Caruso FL. (2013) *Chromobacterium vaccinii* sp. nov., isolated from native and cultivated cranberry (*Vaccinium macrocarpon* Ait.) bogs and irrigation ponds. *International Journal of Systematic and Evolutionary Microbiology* 63(5):1840–1846.

\*Truman AW, Kristjansdottir K, Wolfgeher D, Hasin N, Polier S, Zhang H, Perrett S, Prodromou C, Jones GW & Kron SJ. (2012) CDK-dependent Hsp70 phosphorylation controls G1 cyclin abundance and cell-cycle progression. *Cell* 151(6):1308-1318.

#### CPG

\*Baker WL, Marrs JC, Davis LE, Nutescu EA, Rowe AS, Ryan M, Splinter MY, Vardeny O & Fagan SC. (2013) Key Articles and Guidelines in the Primary Prevention of Ischemic Stroke. *Pharmacotherapy* Feb 11:epub ahead of print.

\*Baker WL, Marrs JC, Davis LE, Nutescu EA, Rowe AS, Ryan M, Splinter MY, Vardeny O & Fagan SC. (2013) Key Articles and Guidelines in the Acute Management and Secondary Prevention of Ischemic Stroke. *Pharmacotherapy* Feb 11:epub ahead of print.

\*Barletta JF. (2012) Clinical and economic burden of opioid use for postsurgical pain: Focus on ventilatory impairment and ileus. *Pharmacotherapy* 32(9 Pt 2):12S-18S.

\*Bowman BJ, Ofner CM, Scott H, & Perrie Y. (2013) Colloidal Dispersions. In LV Allen (Ed.) *Remington: The Science and Practice of Pharmacy* (pp.707-734). London, UK: Pharmaceutical Press.

\*Cauthon KAB, Bowman BJ & Gurney MK. (2013) Compounding practices and beliefs of Arizona pharmacists. *International Journal of Pharmaceutical Compounding* 17(2):154-161.

\*Chamberlain ND, Kim SJ, Vila OM, Volin MV, Volkov S, Pope RM, Arami S, Mandelin AM, 2nd & Shahrara S. (2013) Ligation of tlr7 by rheumatoid arthritis synovial fluid single strand RNA induces transcription of tnfalpha in monocytes. *Annals of the Rheumatic Diseases* 72(3):418-426.

\*Chen Z, Kim SJ, Chamberlain ND, Pickens SR, Volin MV, Volkov S, Arami S, Christman JW, Prabhakar BS, Swedler W, Mehta A, Sweiss N & Shahrara S. (2013) The novel role of IL-7 ligation to IL-7 receptor in myeloid cells of rheumatoid arthritis and collagen-induced arthritis. *Journal of Immunology* 190(10):5256-5266.

\*Cohen LJ & Sclar DA. (2012) Issues in adherence to treatment with monoamine oxidase inhibitors and the rate of treatment failure. *Journal of Clinical Psychiatry* 73(Suppl 1):31-36.

### **CPG** (Continued)

\*Csanyi G, Yao M, Rodriguez AI, Al Ghouleh I, Sharifi-Sanjani M, Frazziano G, Xiaojun H, Kelley EE, Isenberg JS & Pagano PJ. (2012) Thrombospondin-1 regulates blood flow via cd47 receptor-mediated activation of NADPH oxidase 1. *Arteriosclerosis, Thrombosis, and Vascular Biology* Oct 23:epub ahead of print.

\*Coon ID & Haber SL. (2013) What evidence is available on lorcaserin for weight management? *Arizona Journal of Pharmacy* 5(1):28-30.

Davis LE, Storjohann TD, Spiegel JJ, Beiber KM & Barletta JF. (2013) High-fidelity simulation for advanced cardiac life support training. *American Journal of Pharmaceutical Education* 77(3):59.

\*Edeas M & Weissig V. (2013) Targeting mitochondria: Strategies, innovations and challenges: The future of medicine will come through mitochondria. *Mitochondrion* April 3:epub ahead of print.

\*Eriksson EA, Barletta JF, Figueroa BE, Bonnell BW, Vanderkolk WE, McAllen KJ & Ott MM. (2012) Cerebral perfusion pressure and intracranial pressure are not surrogates for brain tissue oxygenation in traumatic brain injury. *Clinical Neurophysiology* 123(6):1255-1260.

\*Eriksson EA, Willekes CL, McAllen KJ, Romeo OM, Hooker RL, Hoogeboom JE & Barletta JF. (2012) Adrenal insufficiency in cardiothoracic patients: An evaluation of the corticotrophin stimulation test and other diagnostic methods. *Journal of Critical Care* 27(5):528 e1-6.

\*Faulk A, Weissig V & Elbayoumi T. (2013) Mitochondria-specific nano-emulsified therapy for myocardial protection against doxorubicin-induced cardiotoxicity. *Methods in Molecular Biology* 991:99-112.

\*Franco DA, Truran S, Burciu C, Gutterman DD, Maltagliati A, Weissig V, Hari P & Migrino RQ. (2012) Protective role of clusterin in preserving endothelial function in al amyloidosis. *Atherosclerosis* 225(1):220-23.

\*Haber SL & Gallus K. (2012) Effects of dark chocolate on blood pressure in patients with hypertension. *American Journal of Health-System Pharmacy* 69(15):1287-1293.

\*Jordan MNA, Brownlow B & Elbayoumi TA. (2012) Development and evaluation of tocopherol-rich argan oil-based nanoemulsions as vehicles possessing anticancer activity. *Journal of Biomedical Nanotechnology* 8 (6):944-956.

\*Jordan M & Elbayoumi TE. (2013) Phosphorylcholine-based biomemetic coatings for nanomedical applications. *Journal of Membrane Science and Technology* 3(1):1-3.

Lai B & Haber SL. (2013) Should gabapentin enacarbil be considered a first-line treatment for restless legs syndrome? *Arizona Journal of Pharmacy* 5(2):30-31.

Ong L & Pogge E. (2012) Drug information question (Is extended-interval dosing of rosuvastatin in patients previously intolerant to statin therapy safe and effective?). *Arizona Journal of Pharmacy* 4(2):30-31.

### **CPG** (Continued)

\*Pogge E. (2012) The Health Benefits of Fibre. AgroFood Industry Hi-tech 23(6):35-37.

\*Pogge EK & Eddings L. (2013) Effect of a 12-week nutrition and wellness program in independent living seniors. *Journal of Nutrition Education and Behavior*. Mar 7:epub ahead of print.

\*Raney EC & El-Ibiary SY. (2012) Immunizations and pregnancy: An update for pharmacists. *Pharmacy Today* 18(10):70-80.

\*Rowles J, Karr S, Gurney MK, Brownlow W, Garza M & Olsen M. (2012) Description of a facile, rapid, and inexpensive method to profile for the organic cation transporter (OCT1) DEL420 variant. *International Journal of Life Sciences, Biotechnology, and Pharmaceutical Research* 1(3):36-41.

\*Rowles J & Olsen M. (2012) Perspectives on the development of antioxidant antiepileptogenic agents. *Mini Reviews in Medical Chemistry* 12(14):epub ahead of print.

\*Rowles J, Wong M, Powers R & Olsen M. (2012) FTO,RNA epigenetics and epilepsy. *Epigenetics* 7 (10):epub ahead of print.

\*Sclar DA, Evans MA, Robison LM & Skaer TL. (2012) Alpha1-proteinase inhibitor (human) in the treatment of hereditary emphysema secondary to alpha1-antitrypsin deficiency: Number and costs of years of life gained. *Clinical Drug Investigation* 32(5):353-360.

\*Sclar DA, Robison LM, Bowen KA, Schmidt JM, Castillo LV & Oganov AM. (2012) Attention-deficit/ hyperactivity disorder among children and adolescents in the United States: Trend in diagnosis and use of pharmacotherapy by gender. *Clinical Pediatrics* 51(6):584-589.

\*Sclar DA, Robison LM, Castillo LV, Schmidt JM, Bowen KA, Oganov AM, Skaer TL & Kogut SJ. (2012) Concomitant use of triptan and SSRI or SNRI after the US food and drug administration alert on serotonin syndrome. *Headache* 52(2):198-203.

\*Sclar DA, Robison LM, Oganov AM, Schmidt JM, Bowen KA & Castillo LV. (2012) Fidaxomicin for clostridium difficile-associated diarrhoea: Epidemiological method for estimation of warranted price. *Clinical Drug Investigation* 32(8):e17-24.

\*Sclar DA, Robison LM, Castillo LV, Bowen KA, Schmidt JM & Oganov AM. (2012) Attention deficit/ hyperactivity disorder among adults in the United States: Trend in diagnosis and use of pharmacotherapy. *Pharmaceutical Medicine* 26(2):97-101.

\*Sclar DA, Robison LM, Cohen LJ, Laubmeier KK, Kalsekar ID & Forbes RA. (2012) Use of a second generation antipsychotic among patients diagnosed with major depressive disorder in the United States: Prescribing pattern and influence of physician specialty. *Pharmaceutical Medicine* 26(6):210-217.

### **CPG** (Continued)

\*Sclar DA, Robison LM, Schmidt JM, Bowen KA, Castillo LV & Oganov AM. (2012) Diagnosis of depression and use of antidepressant pharmacotherapy among adults in the United States: Does a disparitypersist by ethnicity/race? *Clinical Drug Investigation* 32(2):139-144.

\*Tran T, El-Ibiary S, Tindula R, Rai N, Nguyen A & Le J. (2013) Unique pharmacist competency program at community-based, teaching hospitals. *Journal of Hospital Administration* 2(3):119-125.

\*Tsu LV & Dager WE. (2013) Safety of new oral anticoagulants with dual antiplatelet therapy in patients with acute coronary syndromes. *Annals of Pharmacotherapy* 47(4):573-577.

\*Weissig V, Elbayoumi E & Olsen M (Eds.) (2013) *Methods in Molecular Biology 991 (Springer Protocols): Cellular and Subcellular Nanotechnology: Methods and Protocols.* (pp. 1-370) NY: Humana Press.

\*Woloszyn AV, McAllen KJ, Figueroa BE, Deshane RS & Barletta JF. (2012) Retrospective evaluation of nicardipine versus labetalol for blood pressure control in aneurysmal subarachnoid hemorrhage. *Neurocritical Care* 16(3):376-380.

### **INTRAMURAL FUNDING**

### AZCOM

INVESTIGATOR	COLLEGE	DEPARTMENT	TITLE
Al-Nakkash, L.	AZCOM	Physiology	Effects of Genistein on the VCD-induced Menopause Mouse
Broderick, T.	AZCOM	Physiology	Effects of Resveratrol in the Obese Diabetic Mouse
Call, G.	AZCOM	Pharmacology	Determining the Role of Ion Channel Genes in the Response of Drosophila Melanogaster to Halothane
Carroll, C.	AZCOM	Physiology	Tissue Adaptations to Exercise and the Influence of Cyclooxygenase Inhibitors
Georgi, J.	AZCOM	Anatomy	Methods of Estimating Mass of the Head in Complete Specimen
Gonzalez, F.	AZCOM	Microbiology & Immunology	The Effect of Proteolysis on Hyphal Cell Development in Candida Albicans
Grow, W.	AZCOM	Anatomy	The Role of Myogenin and MyoD in Neuromuscular Synapse Formation
Hall, M.	AZCOM	Physiology	Comparative Tissue Glycation in Birds
Heesy, C.	AZCOM	Anatomy	Computer Reconstruction of Regional Brain Volumes in Squamates
Katzif, S.	AZCOM	Microbiology & Immunology	Regulation of the Cold Shock Gene cspA of <i>Staphylococcus</i> <i>aureus</i> by the staphylococcal accessory regulator, SarA
Kaufman, J.	AZCOM	Anatomy	Investigating the Neural Bases of Decision-making Using a Rodent Model of the Iowa Gambling Task
Lawson, K.	AZCOM	Biochemistry	The Role of Aberrant P-Cadherin Expression in Oral Tumor Development
Leyva, K.	AZCOM	Microbiology & Immunology	The Role of Chemokines on Keratocyte Motility and Characterization of Novel Halophiles and Halocins
Nydam, R.	AZCOM	Anatomy	Investigation into the Squamate Fauna of the Early Cretaceous of South Africa & the Late Cretaceous of Southwest Utah
Potter, P.	AZCOM	Pharmacology	Muscarinic Receptor/G-Protein Alterations in Alzheimer's Disease
Tarr, E.	AZCOM	Microbiology & Immunology	Antimicrobial Activity of Nematode Defensins

# **Total AZCOM Intramural Funding: \$69,376**

### **INTRAMURAL FUNDING**

### AZCOPT

INVESTIGATOR	COLLEGE	DEPARTMENT	TITLE
Handford, P.	AZCOPT	Optometry	Use of a Modified CISS to Assess Symptoms in Patients with Accommodative Dysfunction
Harrison, W.	AZCOPT	Optometry	Sensitivity and Specificity of Red on White Visual Fields Versus Dim and Standard White on White Visual Fields in Healthy Individuals of Different Ages
Hobbs, B.; Neuville, J.	AZCOPT	Optometry	Perspectives of Optometry Students on Industry Relationships
Kozlowski, M.	AZCOPT	Optometry	Comparative Functioning of RPE Cell Layers Reconstituted from Naturally-Produced, Stem Cell-Derived, or Immortalized RPE Cells
Meehan, K.; Vasudevan, B.	AZCOPT	Optometry	Use of Visagraph to Assess the Outcome of Oculomotor Vision Training in Children with Oculomotor Dysfunction
Sicks, L.	AZCOPT	Optometry	Millenial Student Attitudes at a New Optometry Program
Vasudevan, B.; Gaib, S.	AZCOPT	Optometry	Comparison of Visual Performance of Multifocal Contact Lenses
Yevseyenkov, V.	AZCOPT	Optometry	Alzheimer's Disease: Amyloid Biomarkers in the Retina as Measured by Cirrus/HDR-OCT and Electrodiagnostic Measures

# Total AZCOPT Intramural Funding: \$20,393

## CCOM

	INVESTIGATOR	COLLEGE	DEPARTMENT	TITLE
	Chandar, N.	ССОМ	Biochemistry	p53 Gene in Cancer
	Edwards, J.	ССОМ	Pharmacology	Altered Insulin Release from Isolated Islets of Langerhans Following Exposure to Cadmium
	Green, J.	ССОМ	Biochemistry	Folic Acid Metabolism
7	LePard, K.	ССОМ	Physiology	Expression of Apoptotic Markers, Glucose Transporters and Insulin Receptors in Gastrointestinal Vagal Neurons in Type 2 Diabetes Mellitus

### **INTRAMURAL FUNDING**

# **CCOM (Continued)**

INVESTIGATOR	COLLEGE	DEPARTMENT	TITLE
Lynch, S.	ССОМ	Biochemistry	Protection of HDL From Oxidative Modification by Vitamin C
Mayer, A.	CCOM	Pharmacology	Neuroinflammation, Microglia and Natural Products
McCulloch, P.	ССОМ	Physiology	Brainstem Cardiorespiratory Control Mechanisms
O'Hagan, K.	ССОМ	Physiology	Effects of Pregnancy on Voluntary Wheel Running Activity in Rat and Comparison of Spontaneous and Paced Physical Activity on the Uterine Vascular Response to Acute Exercise in Normal Rat Pregnancy
Peuler, J.	ССОМ	Pharmacology	Studies in Smooth Muscle: Technical Development for Future Study of Interactive Effects of Metformin and Bethanechol on Gastrointestinal Contractility
Plotkin, B.	ССОМ	Microbiology & Immunology	Effect of Insulin and Other Hormones on Bacterial Virulence
Singleton, M.	ССОМ	Anatomy	Pilot Project: Influence of Cranial Size on Morphological Integration in Cercopithecine Primates
Van Winkle, L.	ССОМ	Biochemistry	A Study of Certain Biochemical and Related Biochemical Events Leading to Implantation of Mouse Blastocysts

# **Total CCOM Intramural Funding: \$48,900**

### CCP

INVESTIGATOR	COLLEGE	DEPARTMENT	TITLE
Gilchrist, A.	ССР	Pharmaceutical Sciences	Development of a Rapid and Robust Method to Diagnose Vancomycin-resistant <i>Enterococci</i> (VRE) Infections and Distinguish Live Versus Dead Pathogens
Hoffman, B. (PGY 1 Resident)	ССР	Pharmacy Practice	Impact of a Diabetes Intervention Tool on the Frequency of Recommendations Made by Pharmacists During a Comprehensive Medication Review
Joshi, M.	ССР	Pharmaceutical Sciences	Liposomal Nanocarrier Based Delivery of ET <sub>B</sub> Receptor Agonist, IRL-1620, for the Treatment of Cerebral Ischemia

### **INTRAMURAL FUNDING**

# **CCP** (Continued)

INVESTIGATOR	COLLEGE	DEPARTMENT	TITLE
Reutzel, T.	ССР	Pharmacy Practice	HPV and HPV Vaccines: An Educational Program for Parents
Rhodes, J. (PGY 2 Resident)	ССР	Pharmacy Practice	Novel Urinary Biomarkers in the Detection of Vancomycin Associated Renal Injury
Venkatesan, N.	ССР	Pharmaceutical Sciences	Development of a Formulation Composition to Prevent Alcohol Induced Dose Dumping with Enteric Coated Formulations
Winkler, S.	ССР	Pharmacy Practice	Transitional Care: Medication Management from Community Hospital to Community Pharmacy

# **Total CCP Intramural Funding: \$34,995**

### CDMI

	INVESTIGATOR	COLLEGE	DEPARTMENT	TITLE
-	Chandar, N. (CDMI Student: Seung Jae)	CDMI ADJUNCT	Dental	Understanding the Regulation of Bone Specific Transcription Factor Cbfa-1 by Tumor Suppressor Gene Rb
	Plotkin, B. (CDMI Student: Zheng Ma)	CDMI ADJUNCT	Dental	Anti-Biofilm Activity of Antibiotics Currently Licensed for the Treatment of Otitis Media Caused by <i>M. catarrhalis</i>
	Singleton, M. (CDMI Student: Greg Brown)	CDMI ADJUNCT	Dental	Effects of Facial Growth Restriction on Infraorbital Morphology in the Rhesus Macaque ( <i>Macaca</i> <i>mulatta</i> ): A Developmental Simulation Study

# **Total CDMI Intramural Funding \$17,160**

CHS

INVESTIGA	TOR	COLLEGE	DEPARTMENT	TITLE
Bhargava,	R.	CHS	Clinical Psychology	Bullying Behaviors, Attitudes Towards Guns and Violence and the Coping Methods of Adolescents

### **INTRAMURAL FUNDING**

# **CHS** (Continued)

INVESTIGATOR	COLLEGE	DEPARTMENT	TITLE
Buhlman, L.	CHS	Biomedical Sciences	Assessing the Mechanism of Nicotinic Protection in Parkin Loss-of-Function Heterozygous Drosophila melanogaster
Burns, S.	CHS	Nurse Anesthesia	Critical Thinking in Nurse Anesthesia Education
Ciancio, M.	CHS	Biomedical Sciences	Influence of Inducible Heat Shock Protein 70 in Preventing Salmonella Typhimurium-induced Gastroenteritis
Evans, C.	CHS	Physical Therapy	Measuring Post-Rehabilitation Community Mobility Using Global Positioning System Technology
Evans, C.	CHS	Physical Therapy	Prevention of High Fat Diet-induced Obesity and Metabolic Syndrome by Voluntary Exercise: Underlying Mechanisms and Mediators
Freeman, D.	CHS	Podiatry	The Effectiveness of a Pilot Faculty Development Program on the Enhancement of Clinical Teaching
Hull, E.	CHS	Biomedical Sciences	Matrix Metalloproteinases in Zebrafish Keratocyte Motility
Hutchings, P.	CHS	Clinical Psychology	Psychologists' Attitudes Toward Psychological Science
Jones, C.	CHS	Biomedical Sciences	Modulation of the Renin-Angiotensin System in Spinal Cord Injury
Kristjansdottir, K.	CHS	Biomedical Sciences	Identifying the NPM1 Interactome in Neuroblastoma Cells
Lee, M.	CHS	Behavior Medicine	The Effects of Graduate Student Peer Review Process on the Quality of Student Academic Writing
Mendel, S.	CHS	Nurse Anesthesia	Interdisciplinary Simulation: Perceptions of Graduate Health Science Students
Nithman, B.	CHS	Physical Therapy	The Reliability of Telehealth Fall & Mobility Screening Applications
Soby, S.	CHS	Biomedical Sciences	Chromobacterium vaccinii sp.nov. as a Potential Biological Control Agent

# **Total CHS Intramural Funding: \$42,902**

#### **INTRAMURAL FUNDING**

#### CPG

INVESTIGATOR	COLLEGE	DEPARTMENT	TITLE
Barletta, J.	CPG	Pharmacy Practice	Use of PPIs in the ICU Setting for Stress Ulcer Prophylaxis
Barletta, J.; El-Ibiary, S.	CPG	Pharmacy Practice	What Makes the Ideal PGY-1 Pharmacy Practice Residency Candidate? A Survey of Program Directors
Bowman, B.; Raney, E.	CPG	Pharmaceutical Sciences and Pharmacy Practice	Implementation and Evaluation of a Mentoring Strategy for the Professional Development of Student Leaders within the MWU-CPG APhA-ASP Chapter
Davis, L.	CPG	Pharmacy Practice	Patient Satisfaction and Rate of Hospital Readmission or Death for Patients Receiving Enhanced Inpatient Heart Failure Education by Pharmacists
Elbayoumi, T.	CPG	Pharmaceutical Sciences	Genistein-loaded Lipidic Nanocarrier Adjuvants Enhance Anticancer Efficacy and Overcome Cancer Resistance to Chemotherapy
El-Ibiary, S.	CPG	Pharmacy Practice	An Assessment of Arizona Pharmacy Students' Attitudes and Beliefs after Experiences with Pharmacist Provision of Emergency Contraception
Jordan, M.; Patton, L.	CPG	Pharmaceutical Sciences and Pharmacy Practice	Development of Guidelines for Accurate Measurement of Small Volume Parenterals Using Syringes
Karr, S.; Knudsen-Gerber, D.	CPG	Pharmacy Practice	Assessing Accuracy and Impact on Clinical Decision- making of Community-based Blood Pressure Monitoring
Knudsen-Gerber, D.	CPG	Pharmacy Practice	Emergency Department Utilization in the Elderly Prescribed Oral Clonidine as Needed for Hypertension in the Ambulatory Care Setting
Olsen, M.	CPG	Pharmaceutical Sciences	Novel Agents for the Treatment of Epilepsy
Rowles, J.	CPG	Pharmaceutical Sciences	Measurement of Critical Thinking Skills and Disposition of Students
Weissig, V.	CPG	Pharmaceutical Sciences	Mitochondria-targeted Delivery of Antioxidants in Cells Exposed to Oxidative Stress

# **Total CPG Intramural Funding: \$41,957**

TOTAL MWU INTRAMURAL FUNDING AWARDED BY ALL COLLEGES IN THIS REPORT PERIOD: \$275,683

### **UNIVERSITY-FUNDED RESEARCH ASSOCIATES BY CAMPUS\***

MWU "HARD MONEY" RESEARCH ASSOCIATES			
CAMPUS	FTE	TOTAL COMPENSATION FOR REPORT PERIOD	
DOWNERS GROVE, IL	22.0	\$1,222,460	
GLENDALE, AZ	22.0	\$1,033,524	
TOTAL	44.0	\$2,255,984	

# \*THIS INCLUDES FUNDED OR FILLED POSITIONS. THIS DOES NOT INCLUDE "SOFT MONEY" RESEARCH ASSOCIATES FUNDED BY GRANTS OR CONTRACTS

# TOTAL COMPENSATION TO ALL COLLEGES FOR RESEARCH ASSOCIATE SUPPORT IN FISCAL YEAR 2013 IS \$2,255,984

# **UNIVERSITY-FUNDED CAPITAL RESEARCH EQUIPMENT**

Another manner in which MWU supports research is thru consideration and funding of capital research equipment requests submitted by faculty. From FY 2001 thru FY 2012, MWU has spent \$5,126,600 on capital equipment purchases for research purposes, including \$737,600 in FY 2012.

### **UNIVERSITY-FUNDED PER DIEM CHARGES**

A way in which MWU supports research is through the waiving of animal per diem charges. In FY 2013, MWU waived \$107,814 in animal per diem charges on the Illinois campus and \$8,252 on the Arizona campus.

### TOTAL ANIMAL PER DIEM CHARGES THAT WERE WAIVED ACROSS BOTH CAMPUSES IN THIS REPORT PERIOD: \$116,066

### **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 the grant funds are exhausted the additional pay is eliminated. Over the twelve fiscal years spanning from 2001 to 2012, MWU paid out \$825,961 as "Additional Compensation" to faculty Principal Investigators on grants. This payment is available to all faculty who receive funding for their research, subject to the ORSP's *Recaptured Salaries on Grants* policy.

#### THE ORSP WEBSITE CAN BE FOUND AT

http://www.midwestern.edu/ORSP.html