

*Investing in Future Leaders in
Pharmaceutical Science Research and Education*

**2011 AFPE
Pre-Doctoral Fellows and
Pharmacy Faculty Researcher**





Incorporated 1942

**AMERICAN FOUNDATION
FOR PHARMACEUTICAL EDUCATION**
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AFPE
"Educating Tomorrow's Leaders in the Pharmaceutical Sciences"

Dear Sponsors and Donors:

I am pleased to present the 2011 Pre-Doctoral Fellows and Pharmacy Faculty Researcher selected to receive AFPE support during the 2011-2012 academic year.

The Board of Grants was impressed with the high caliber of the students and faculty who applied to become AFPE Fellows this year. Even with your generous annual support, there were more highly qualified applicants than we can support at our current level of funding.

The research projects of these AFPE award winners address adherence, alcohol abuse, basal ganglia-related disorders, bio-accumulation phenomena, cardiovascular disease, cystic fibrosis, deep vein thrombosis, depression, dermatitis, diabetes, dilated cardiomyopathy, drug advertising, drug dosage determination, drug permeability, geriatric drug-related cognitive impairment, hemophilia, HIV, hypersensitivity reactions, infantile hemangiomas, infectious disease, inflammatory bowel disease, leukemia, medication therapy management, multiple myeloma, muscular dystrophy, neurological disease, nonalcoholic fatty liver disease, oncology (brain, breast, colon, ovarian, prostate, stem cells), opioid dependence, opportunistic infections, Parkinson's Disease, PBM reimbursement, pharmacist disease counseling, practice-based research networks, septicemia, solid oral dosage forms, and transdermal drug delivery.

As a former Fellow, I know first-hand how our Fellows' cutting-edge research contributes to innovations in pharmaceutical research and pharmaceutical science education. My dissertation research on renal transport resulted in several strong publications and paved the way for a productive career in biotechnology & regulatory affairs. My AFPE Pre-Doctoral Fellowship enabled me to focus intensively on my research, rather than on how to pay my bills.

On behalf of AFPE, thank you for your generous support that enables the Foundation to identify and support the top echelon of students and faculty who are future leaders in pharmaceutical science research and education.

Sincerely,

Carol A. Gloff, Ph.D.
Chairman, AFPE Board of Grants

2011 PRE-DOCTORAL FELLOWS & FACULTY RESEARCHER

2011 AFPE First Year Graduate School Fellows (2)

Name	Area of Study	Focus	School /College of Pharmacy
Julieta Scalo	<i>Translational Science</i>	Oncology	University of Texas
Ben Y. Urick	<i>Pharmaceutical Socioeconomics</i>	PBM Reimbursement Issues	University of Iowa

2011 AFPE Pre-Doctoral Fellows in Pharmaceutical Science (57)

Name	Title of Research	Focus	School /College
Brittany R. Avaritt	<i>Mechanisms of Dendrimer-Mediated Oral Drug Delivery</i>	Oncology	University of Maryland
Bruce N. Bagley	<i>Spontaneous Dominant Leukemia (Sdl), a Novel Mouse Model of Leukemia</i>	Leukemia	University of Wisconsin
Jason Baik	<i>Multiscale Biodistribution Analysis of Lipophilic Poorly Soluble Drugs</i>	Bioaccumulation Phenomena	University of Michigan
Melissa L. Barker-Haliski	<i>Regulation of Arc mRNA in Striatal Efferent Neurons</i>	Neurological Disease	University of Utah
Sidney Bolden	<i>Design, Synthesis, and Evaluation of Novel Thiobenzyl Quinolinium Salts Against Opportunistic Infections.</i>	Anti-opportunistic Infection Agents	Florida A & M University
Erin B. Bruce	<i>Potential Cardioprotective Effects of AT2R and Ang-(1-7) Elevation in Dilated Cardiomyopathy</i>	Dilated Cardiomyopathy	University of Florida
Benjamin J. Bruno	<i>Delivery of Peptide Based Therapies with Cell Penetrating Peptides (CPP) for the Treatment and Eradication of Chronic Myelogenous Leukemia</i>	Chronic Myelogenous Leukemia	University of Utah

Name	Title of Research	Focus	School /College
Shona A. Burkes	<i>Ontogeny and Quantitative Multimodal Skin Imaging of Infantile Hemangiomas</i>	Infantile Hemangiomas	University of Cincinnati
Timothy M. Cernohous	<i>A Grounded Theory Approach to Determining a Patient's Decision (DECISION Study) to use Medication Therapy Management Services</i>	Medication Therapy Management	University of Minnesota
Elizabeth H. Chang	<i>Engaging Patients to Participate in Medication Therapy Management Services</i>	Medication Therapy Management	University of Iowa
Vaishali L. Chudasama	<i>Mechanism-Based Cellular Pharmacodynamic Modeling of Combination Chemotherapy in Multiple Myeloma</i>	Multiple Myeloma	SUNY at Buffalo
Jonathan E. Constance	<i>Selective Elimination of Chronic Myelogenous Leukemia Cells Through the Mitochondrial Targeting of Bcr-Abl via an Engineered Protein Chaperone</i>	Chronic Myelogenous Leukemia	University of Utah
Samuel T. Crowley	<i>Development of a DNA Delivery Nanoparticle Incorporating Phospholipase A2</i>	Gene Therapy	University of Iowa
Laurie L. Eckert	<i>Microglia and a Dopamine-Derived Neurotoxin, 3,4-Dihydroxyphenylacetaldehyde: Metabolism, Toxicity, Activation, and Implications for Parkinson's Disease</i>	Parkinson's Disease	University of Iowa
Rachel J. Eclow	<i>Mechanisms Regulating the Expression and Function of MXR</i>	Drug Resistance in Breast and Prostate Cancer	University of California, SF
Mark D. Ericson	<i>The Synthesis of Reducible Polypeptides</i>	Cystic Fibrosis & Hemophilia	University of Iowa
Adrienne E. Faerber	<i>Assessing the Veracity of Television Advertisements for Prescription and Over-the-Counter Drugs</i>	Drug Advertising Assessment	University of Wisconsin

Name	Title of Research	Focus	School /College
Justin D. Gatwood	<i>Mobile Health Technology and Medication Use Behavior: A Tailored Messaging Approach to Improving Treatment Adherence in Patients with Acute Coronary Syndrome</i>	Cardiovascular Disease Medication Adherence	University of Michigan
Elizabeth A. Gimys	<i>Synthesis and Investigation of Novel Direct Thrombin Inhibitors</i>	Acute Coronary Syndromes	University of Michigan
Anita Grover	<i>Characterizing the Clinically Relevant Half Life in Pharmacokinetics and Pharmacodynamics</i>	Predicting Drug Dosing Intervals	University of California, SF
Douglas A. Hansen	<i>Chemoenzymatic Synthesis of Natural and Unnatural Products</i>	Bacterial Infections	University of Michigan
Rhiannon N. Hardwick	<i>The Progression from Steatosis to NASH Leads to Alterations in Drug Metabolizing Enzyme and Transporter Expression with Significant Consequences for Pharmaceutical Disposition</i>	Medication Risk Reduction in Nonalcoholic Fatty Liver Disease	University of Arizona
Andrew M. Hau	<i>Characterization of the Mechanism of Coibamide A-Induced Cell Death in Human Glioblastoma Cells</i>	Brain Tumor Treatment	Oregon State University
Lisa M. Hoffman	<i>Evaluation of the Cytotoxicity of Ethylene Bisdithiocarbamate Pesticides in Human Colon Cells</i>	Colon Cancer & Inflammatory Bowel Disease	St. John's University
Jacob L. Houghton	<i>Utilizing and Characterizing Aminoglycoside Acetyltransferases as Tools in Developing Novel Aminoglycoside Antibiotics</i>	Antibiotic Resistant Bacterial Infections	University of Michigan
Basma M. Ibrahim	<i>Development of Inhalable Gene Delivery for Treatment of Cystic Fibrosis</i>	Cystic Fibrosis	Purdue University
Michael T. Jacobsen	<i>Development of Novel Bioresponsive Hybrid Materials</i>	Polymer-based Oncology Therapies	University of Utah
Ronald J. Jenkins	<i>Phage Display as a Tool for Probing Early Acyltransferases of Lipid A Biosynthesis</i>	Gram-negative Bacterial Septicemia	University of Michigan

Name	Title of Research	Focus	School /College
Caitlin A. Knox	<i>Type II Diabetes in Pregnant Women: Incidence, Drug Utilization, and Outcomes of Women with Type II Diabetes during Pregnancy</i>	Type II Diabetes	University of Florida
Matthew P. Kosloski	<i>Improving the Pharmaceutical Properties of Factor VII with Protein Modification</i>	Hemophilia A	SUNY at Buffalo
Terri D. La Count	<i>Skin Absorption Modeling of Metal Allergens Using a Polar Pathway</i>	Contact Dermatitis	University of Cincinnati
Caroline A. Larregieu	<i>Investigating the Role of Drug Permeability in Presystemic Transport and Metabolism</i>	Role of Drug Permeability in Drug Transport	University of California - SF
Christine S. Lee	<i>Increasing Community Pharmacists Lifestyle Related Disease Counseling Rates through Professional Moral Engagement</i>	Pharmacist Lifestyle-related Disease Counseling	University of Florida
Kevin A. Look	<i>Impact of Closing the Medicare Part D Donut Hole on Program Costs and Enrolled Seniors' Adherence to Prescription Drug Therapy</i>	Medicare Part D Prescription Drug Program	University of Wisconsin
Neang S. Ly	<i>Impact and Mechanism-Based Pharmacodynamics Modeling of Quorum Sensing on Bacterial Responses to Antibiotics in Pseudomonas Aeruginosa</i>	Optimizing Dosage Regimens for Infectious Disease	SUNY at Buffalo
Leah N. Makley	<i>High-throughput Screening and Rational Design of Small Heat Shock Protein Modulators</i>	Neuro-degenerative Diseases	University of Michigan
Jason N. Mock	<i>Targeted Liposomal Drug Delivery via Secretory Phospholipase A2 (sPLA2) Mediated Degradation and Uptake</i>	Prostate Cancer Treatment	University of Georgia
Sweta J. Modi	<i>Mechanism Based Liposome Loading Strategies and Predictive Release Kinetics of Hydrophobic and Hydrophilic Anticancer Agents</i>	Oncology	University of Kentucky

Name	Title of Research	Focus	School /College
Deanna M. Mudie	<i>Mass Transport Analysis of an In Vitro Two-phase Dissolution Apparatus for Bioperformance Prediction of Solid Oral Dosage Forms</i>	Bioperformance of Solid Oral Dosage Forms	University of Michigan
Bryan W. Newman	<i>New Therapies for Breast Cancer Stem Cells through Parthenolide Inspired Drug Discovery</i>	Targeting Cancer Stem Cells	University of Michigan
Andrew G. Newsome	<i>Isolation, Characterization, and Potential Applications of Natural Blue Pigments of the Bacterial Kingdom</i>	Infectious Disease	University of Illinois
Erin K. Nyren-Erickson	<i>Fluorescent Lipid Nanoparticles for the Detection of Biological Macromolecules and Targeted Drug Delivery</i>	Alzheimer's Disease & Metastatic Cancers	North Dakota State University
Martha K. Pastuszka	<i>Development of a Rapid, Reversible Protein Switch for Studying Cellular Biology in Eukaryotes</i>	Oncology	University of Southern California
Brandon J. Patterson	<i>Explaining Relationship Development within Practice Based Research Networks</i>	Practice-based Research Networks	University of Iowa
Ryan M. Pearson	<i>Novel Multivalent and Multifunctional Dendron-based Nanocarriers for Targeted Cancer Therapy</i>	Oncology	University of Illinois
Gretchen L. Peirce	<i>Psychological Contract Violations and Organizational Citizenship Behaviors in Academic Pharmacy</i>	Psychological Contract Breach	University of Oklahoma
Vanessa R. Porter	<i>Improving the Bioavailability of Mixed Efficacy Opioid Ligands</i>	Opioid Tolerance & Dependence	University of Michigan
Heidi A. Schwanz	<i>Intermolecular Interactions and Structural Features of Quinolone-Class Gyrase Inhibitors for Activity Against Drug-Resistant Microorganisms</i>	Drug Resistant Microorganisms	University of Iowa
Kenneth T. Simmons	<i>Analysis of the Immune Response to PEGylated Nanoparticles</i>	Hypersensitivity Reactions	University of Wisconsin

Name	Title of Research	Focus	School /College
Jonathan T. Sockolosky	<i>Hijacking the IgG/FcRn Interaction: FcRn Binding Polypeptides as a General Strategy for Improving Circulation Time and Organ Specific Protein Delivery</i>	Oncology & Immunology	University of California, SF
Neha H. Thakore	<i>Neural Substrates of Cocaine Craving</i>	Drug Dependence & Addiction	University of Texas
Tyrell R. Towle	<i>Structural Requirements of Quinolone Class Antibiotics to Kill Bacteria in the Absence of Ongoing Protein Synthesis</i>	Infectious Disease	University of Iowa
Grace C. Welham	<i>Individual and Systemic Factors Contributing to Wasted Prescription Opioid Analgesics</i>	Opioid Analgesics	University of Wisconsin
Ryan M. Williams	<i>The Selection of a Prostate Cancer Cell-Specific Molecular Recognition Element (MRE) for Targeted Therapy and Disease Detection</i>	Prostate Cancer Detection & Treatment	West Virginia University
Matthew J. Witry	<i>Investigation of Pharmacist and Student Pharmacist Communication Styles when Discussing Medication Adherence</i>	Medication Adherence	University of Iowa
Angela K.H. Wolf	<i>Hybrid V-ATPase Inhibitors for Selective Delivery to Breast Tumors</i>	Breast Cancer Treatment	Purdue University
Megan M. Yardley	<i>Development of Ivermectin (IVM) as a Therapeutic Agent for Alcohol Related Disorders</i>	Alcohol Abuse	University of Southern California

2011 AFPE Pre-Doctoral Fellows in Clinical Pharmaceutical Science (8)

Name	Title of Research	Focus	School /College
Nicole K. Brogden	<i>Clinical Evaluation of Novel Methods for Extending Microneedle Pore Lifetime</i>	Transdermal Drug Delivery	University of Kentucky
Whitney P. Caron	<i>Development of Phenotypic Probes of the Mononuclear Phagocyte System (MPS) to Guide Therapy of Pegylated Liposomal Doxorubicin in Patients with Recurrent Ovarian Cancer</i>	Oncology & Nanotoxicology	University of North Carolina

Name	Title of Research	Focus	School /College
Lindsay M. Ferguson	<i>Effects of Vaginal Fluid on the Stability of Microbicide Candidates: Preclinical Evaluations and Drug Delivery Strategy Development</i>	HIV Microbicide Drug Delivery	University of Pittsburgh
Deanna S. Flora	<i>Developing an Index to Assess Drug Burden and its Association with Cognitive Impairment in Community Dwelling Older Adults</i>	Geriatric Cognitive Impairment Index	Virginia Commonwealth University
Daniel Gonzalez	<i>Use of Dermal Microdialysis to Evaluate the Effect of Skin Properties and Application Site on the Topical Bioequivalence of Diclofenac</i>	Transdermal Drug Delivery Systems	University of Florida
Daniel L. Hertz	<i>Genetic Predictors of Taxane Treatment Outcomes</i>	Breast Cancer Treatment	University of North Carolina
Diana N. Pinchevsky	<i>Identifying Genetic Factors that Link Depression and Cardiovascular Diseases to Translate the Findings to Biomolecular Pathophysiology Research and Patients' Outcomes</i>	Pathogenic Factors in Depression & Heart Disease	University of Pittsburgh
Jasmine A. Talameh	<i>Genetic and Pharmacogenetic Associations with Heart Failure Patient Survival</i>	Heart Failure Mortality	University of North Carolina

2011 AFPE Pharmacy Faculty Development Fellow (1)

Name	Title of Research	Focus	School /College
Felix K. Yam	<i>Evaluating Medication Regimen Complexity During Transition of Care in an Elderly Veteran Population</i>	Geriatric Medication Regimen Complexity	University of California, SD



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Dear Friends and Supporters of AFPE:

The Board of Directors and I wish to thank the companies, associations, foundations, and individuals who provide support for the AFPE pharmaceutical science education awards program. Despite these difficult financial times, support for future pharmaceutical scientists and pharmacy faculty educators & researchers continues to be strong. Your financial support illustrates that educating future pharmaceutical science research leaders remains a priority in the strategic initiatives of our many partners.

The students and faculty supported by your annual contributions reflect the exceptional quality of US pharmaceutical science graduate students and pharmacy college faculty. Contributions to AFPE are a sound investment in developing the best and brightest researchers and educators to ensure a productive pharmaceutical education, research, development, and manufacturing environment.

In the last 24 months, AFPE has undertaken an assessment of its operations, fundraising strategies, and education programs. We, like many of our member associations, corporate patrons and individual donors, are being asked to do more within constrained budgets. AFPE remains committed to using our resources to sustain our distinguished history of support for pharmaceutical education.

As you review the list of 2011 award recipients, we encourage you to continue your support or to make your first contribution this year. The financial demands on pharmaceutical science graduate students and their institutions continue to grow. Consequently, AFPE seeks to provide awards at levels sufficient to reflect the high value our nation places on the education of future pharmaceutical science researchers and educators. Your continued help to accomplish this goal is essential and appreciated.

Thank you.

Sincerely,

Ernest Mario, Ph.D.
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