**Scientific Poster Presentations, II**

**Tuesday, October 14**
Convention Center:
Exhibit Hall 5
8:00 a.m.–10:00 a.m.

**ENCORE PRESENTATIONS**
Abstracts marked with an “E” are Encore Presentations. Encore Presentations undergo the same peer-review process as all other presentations, but they may have been presented elsewhere or published in abstract form before the 2014 Annual Meeting.

**AWARDS COMPETITION**
Abstracts marked with an “F” are finalists for the Best Student Poster, Best Resident and Fellow Poster, and Best Paper awards. These papers were selected by special panels of reviewers. Award winners for the Best Student Poster and Best Resident and Fellow Poster will be announced at 1:00 p.m. on Monday, October 13, in the Austin Convention Center, Exhibit Hall 5. The award winner for the Best Paper will be announced at 9:45 a.m. on Tuesday, October 14, in Exhibit Hall 5.

**ORIGINAL RESEARCH**
These papers describe original research in therapeutics, pharmacokinetics, pharmacodynamics, pharmacoconomics, and pharmacoepidemiology.

**Adult Medicine**

3E. Impact of lorcaserin in obese and overweight patients with prediabetes on weight loss (WL) and reducing progression to diabetes.
*Richard Nesto, MD*¹, Randi Fain, MD², Yuhan Li, PhD², William Shanahan, MD³, William Soliman, PhD²; (1)Lahey Hospital and Medical Center; (2)Eisai Inc.; (3)Arena Pharmaceuticals

5. Rivaroxaban compared to warfarin for the prevention of venous thromboembolism after major orthopedic surgery in a community hospital.
*Dr. Nicole Cieri, PharmD, BCPS*¹, Dr. Kristen Kusmierski, PharmD, BCPS, CACP², Dr. Cynthia Lackie, PharmD², Mr. Michael Botros, PharmD Candidate¹, Ms. Candace Villenuve, PharmD Candidate¹; (1)D’Youville College School of Pharmacy, Buffalo, NY; (2)Pharmacy, Millard Fillmore Suburban Hospital, Williamsville, NY

*Lydia Newsom, PharmD*¹, Nicole L. Metzger, Pharm.D., BCPS², Melissa M. Chesson, Pharm.D., BCPS², Samuel K. Peasah, PhD, MBA, RPh², Jason Stein, M.D., SFHM³; (1)Department of Pharmaceutical Sciences, Emory University Hospital, Atlanta, GA; (2)Department of Pharmacy Practice, Mercer University College of Pharmacy, Atlanta, GA; (3)Hospital Medicine, Emory University School of Medicine, Atlanta, GA

8. Comparison of enoxaparin with unfractionated heparin (UFH) for venous thromboembolism (VTE) prophylaxis in medically ill dialysis patients.
Amanda Buckallew, Pharm.D.\textsuperscript{1}, Katie Buehler, PharmD\textsuperscript{2}, Brian Lee, Pharm.D.\textsuperscript{1}; (1)Missouri Baptist Medical Center, St. Louis, MO; (2)St. Louis College of Pharmacy, Saint Louis, MO

Ambulatory Care

9E. Improving Health For At-Risk Rural Patients (IHARP): Medication Use Coordination.
Dr. Michael Czar, PhD, RPh\textsuperscript{1}, Dr. William Lee, BPharm, MPA\textsuperscript{1}, Dr. Leticia R. Moczygemba, PharmD, PhD\textsuperscript{2}, Dr. Andrea L. Pierce, PharmD\textsuperscript{2}, Dr. Tanvi Patil, PharmD\textsuperscript{1}, Dr. Nikisa Blevins, PharmD\textsuperscript{1}, Dr. Karen Williams, PharmD\textsuperscript{1}, Dr. Heidi Wengerd, PharmD\textsuperscript{1}, Dr. Courtney Dickerson, PharmD\textsuperscript{1}, Dr. Kelley Mills, PharmD\textsuperscript{1}, Dr. Gary R. Matzke, PharmD\textsuperscript{2}; (1)Carilion New River Valley Medical Center; (2)Department of Pharmacotherapy and Outcomes Sciences, Virginia Commonwealth University School of Pharmacy, Richmond, VA

Cardiovascular

Dr. Bryan Laulicht, PhD\textsuperscript{1}, Dr. Sasha Bakhrui, PhD\textsuperscript{2}, Dr. Solomon Steiner, PhD\textsuperscript{3}, Dr. Jack Ansell, MD\textsuperscript{1}, Dr. Karen Brown, PhD\textsuperscript{3}, Dr. Hiroshi Masumoto, PhD\textsuperscript{4}, Dr. Yoshiyuki Morishima, PhD\textsuperscript{5}, Dr. Michael Grosso, MD\textsuperscript{6}, Dr. Michele Mercuri, MD, PhD\textsuperscript{7}, Dr. Robert Noveck, MD, PhD\textsuperscript{8}, Dr. James Costin, MD\textsuperscript{1}; (1)Perosphere Inc, Danbury, CT; (2)Perosphere Inc, Perosphere Inc., Danbury, CT; (3)Clinical Pharmacology, Daiichi-Sankyo, Edison, NJ; (4)Global Project Management, Daiichi-Sankyo, Edison, NJ; (5)Research and Development Division, Daiichi-Sankyo, Tokyo, Japan; (6)Cardiovascular Clinical Research, Daiichi-Dankyo, Edison, NJ; (7)Clinical Development, Daiichi-Sankyo, Edison, NJ; (8)Clinical Research Unit, Duke University School of Medicine, Durham, NC

Jennifer L. Donovan, PharmD\textsuperscript{1}, Abir O. Kanaan, PharmD\textsuperscript{1}, Brett Rollins, PharmD\textsuperscript{2}, Matthew A. Silva, PharmD\textsuperscript{1}; (1)MCPHS University, Worcester, MA; (2)MCPHS University, Worcester, MA

25. Dose related patterns of ventricular arrhythmia due to carvedilol withdrawal in patients with systolic heart failure.
Kazuhiko Kido, Pharm.D.\textsuperscript{1}, Sara Brouse, Pharm.D.\textsuperscript{1}, Tracy Macaulay, Pharm.D.\textsuperscript{1}, Richard Charnigo, Ph.D.\textsuperscript{2}, Paul Anaya, M.D., Ph.D.\textsuperscript{3}; (1)Pharmacy Services, University of Kentucky HealthCare, Lexington, KY; (2)Department of Statistics, University of Kentucky, Lexington, KY; (3)Gill Heart Institute, University of Kentucky HealthCare, Lexington, KY

26E. Management of dyspepsia symptoms on dabigatran during RELY-ABLE: a long-term follow up of RE-LY patients.
Paul Reilly, PhD\textsuperscript{1}, Robby Nieuwlaat, PhD\textsuperscript{2}, Jeff Healey, MD\textsuperscript{2}, Stephan Formella, MD\textsuperscript{3}, Lars Wallentin, MD, PhD\textsuperscript{4}, Salim Yusuf, DPhil\textsuperscript{2}, Stuart Connolly, MD\textsuperscript{2}; (1)Boehringer Ingelheim, Ridgefield, CT; (2)McMaster University and Hamilton Health Sciences, Canada; (3)Boehringer Ingelheim GmbH & Co. KG, Germany; (4)Department of Medical Sciences and Uppsala Clinical Research Center, Uppsala University
27E. Impact of selective serotonin reuptake inhibitor use on the effectiveness of clopidogrel therapy following coronary stent placement.

*Alicia Mattson, Pharm.D., BCPS*¹, James Wolff, Pharm.D.⁰, Michael Lewandowski, Pharm.D., BCPS⁰, James Bischoff, Pharm.D.⁰, Andrew Borger, PhD⁰; (1)Department of Pharmacy, Gundersen Health, La Crosse, WI; (2)Department of Pharmacy, North Memorial Medical Center, Robbinsdale, MN; (3)Department of Medical Research, Gundersen Health, La Crosse, WI

**Clinical Administration**

34. Examination of collaboration, communication, and professional activity awareness among faculty and non-faculty pharmacists at an affiliated academic institution.

*Laura Siemianowski, PharmD, BCPS, Sanchita Sen, PharmD, BCPS, Brandon Patterson, PharmD, PhD*; Department of Pharmacy Practice and Pharmacy Administration, Philadelphia College of Pharmacy, Philadelphia, PA

**Community Pharmacy Practice**

36E. Managing Patients with Type 2 Diabetes from the “Sweet Spots” in the Community.

*Zexuan Koh, BSc(Pharmacy)¹, Melanie Siaw, BSc(Pharmacy)¹, Parry Zhang, BSc(Pharmacy)², Joyce Lee, PharmD, BCPS, BCACP²*; (1)Department of Pharmacy, Faculty of Science, National University of Singapore, Singapore; (2)Department of Pharmacy, NTUC Unity Healthcare Co-operative Ltd., Singapore

**Education/Training**

46. Gamification of pharmacy practices – What students want for their education.

*Mr. David Poh, B.Sc.(Pharmacy)¹, Ms. Huan Ying Chang, B.Sc.(Pharmacy)¹, Dr. Li Lian Wong, Pharm.D.¹, Mr. John Yap, M.A.², Dr. Kevin Yap, Ph.D., SRPharmS¹*; (1)Department of Pharmacy, Faculty of Science, National University of Singapore, Singapore; (2)Computer Centre, National University of Singapore, Singapore

52. Tracking patient encounters and performed clinical skills to determine student competency in advanced pharmacy practice experiences.

*Chrystian R. Pereira, Pharm.D.¹, Jody Lounsbrey, Pharm.D.¹, Ila M. Harris, Pharm.D.², Jean Moon, Pharm.D.¹, Sarah M. Westberg, Pharm.D.¹, Claire Kolar, Pharm.D.¹*; (1)Department of Pharmaceutical Care and Health Systems, University of Minnesota College of Pharmacy, Minneapolis, MN; (2)Department of Family Medicine and Community Health, University of Minnesota Medical School, Minneapolis, MN

54. Alternative methods of interprofessional communication simulations: using technology to enhance interprofessional education.

*Matthew Kostoff, Pharm.D., BCPS, Tiffany Shin, Pharm.D., BCACP, Ann Heble, Pharm.D. Candidate, Brian Kempin, Pharm.D. Candidate, Astyn Miller, Pharm.D. Candidate, Nicholas Patykiewicz, Pharm.D. Candidate, Sarah P. Shrader, Pharm.D., BCPS*; University of Kansas School of Pharmacy, KS

55. A Method for Pharmacy Resident Candidate Screening Prior to Interview.

*Dr. Michael J. Peeters, PharmD, Med, BCPS¹, Todd E. Gundrum, PharmD, BCPS², Julie A. Murphy, PharmD, BCPS, FASHP, FCCP¹*; (1)University of Toledo College of Pharmacy, Toledo, OH; (2)Department of Pharmacy Services, University of Toledo Medical Center, Toledo, OH
58. Pharmacy student opinions and performance following implementation of a “flipped classroom”. 
Amy C. Donihi, PharmD; University of Pittsburgh School of Pharmacy, Pittsburgh, PA

61. Perceived skill challenges and possible solutions for ACCP EDTR PRN members accomplishing scholarly activity.
Jennifer N. Clements, Pharm.D., BCPS, CDE, BCACP1, Melody L. Hartzler, PharmD, AE-C2, Amy Franks, Pharm.D.3, Tracy Sprunger, Pharm.D.4, Lamis Karaoui, PharmD, BCPS5, Douglas Steinke, Ph.D.6, Tina Denetclaw, Pharm.D., BCPS7; (1)Presbyterian College School of Pharmacy, Clinton, SC; (2)Cedarville University School of Pharmacy, Cedarville, OH; (3)College of Pharmacy, Department of Pharmacy Practice, University of Arkansas for Medical Sciences, Little Rock, AR; (4)Butler College of Pharmacy and Health Sciences, Butler University, Indianapolis, IN; (5)School of Pharmacy - Department of Pharmacy Practice, Lebanese American University, Byblos, Lebanon; (6)Manchester Pharmacy School, University of Manchester, Manchester, United Kingdom; (7)Department of Clinical Pharmacy, School of Pharmacy, University of California, San Francisco, San Francisco, CA

62. Student perceived benefit of integrating patient safety into a pharmacy curriculum.
Edward T. Van Matre, PharmD1, Katy E. Trinkley, PharmD2, Scott W. Mueller, PharmD2, Robert L. Page II, PharmD, MSPH, FCCP, FAHA, BCPS2, Kavita V. Nair, PhD2; (1)University of Kentucky HealthCare, Lexington, KY; (2)University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences, Aurora, CO

64. Pharmacy student and preceptor interventions and student perspective on a medical mission trip.
Gina M. Prescott, Pharm.D., BCPS1, Carolyn Hempel, PharmD, BCPS2; (1)State University of New York at Buffalo, Buffalo, NY; (2)State University of New York at Buffalo School of Pharmacy and Pharmaceutical Sciences, Buffalo, NY

Endocrinology

73E. Canagliflozin monotherapy provides reductions in both A1C and body weight in patients with type 2 diabetes mellitus.
Dr. Michael Davies, PhD1, Dr. William Canovatchel, MD2, Dr. Ujjwala Vijapurkar, PhD2, Dr. Gary Meininger, MD2; (1)Diabetes - Medical Affairs, Janssen Scientific Affairs, LLC., Raritan, NJ; (2)Janssen Research & Development, LLC

74E. Association of Medication Adherence with Psychological Distress in Relation to Types of Antidiabetic Medications Among Patients with Uncontrolled Type 2 Diabetes.
Melanie Siaw, BSc(Pharmacy), Joyce Lee, PharmD, BCPS, BCACP; Department of Pharmacy, Faculty of Science, National University of Singapore, Singapore

76E. ABC goal attainment in patients with type 2 diabetes mellitus in US primary care.
Edward Shahady, MD1, Jodi Strong, APNP, CDE, BC-ADM, CPT2, Terry Dex, PharmD3, Mehul Dalal, PhD3, Jeffrey Frimpter, MPH4, Wei Zhou, MSc5, John Stewart, MSc5; (1)Florida Academy of Family Physicians, Jacksonville, FL; (2)Ministry Medical Group, Stevens Point, WI; (3)Sanofi US, Inc., Bridgewater, NJ; (4)Doctor Evidence, Santa Monica, CA; (5)Sanofi Canada, Laval, QC, Canada

77. Sitagliptin Associated Pancreatic Carcinoma: A Review of the FDA AERS Database.
Dr. Angela Nagel, PharmD, BPS, Dr. Gabriela Cipriano, PharmD, Dr. Nabila Ahmed-Sarwar, PharmD, BPS, Mr. Robbert van Manen, M.Sc., Dr. Jack Brown, PharmD, MS, BPS; Wegmans School of Pharmacy, St. John Fisher College, Rochester, NY
83E. Lower risk of hypoglycemic events with dapagliflozin than glipizide over 4 years in a phase 3 study. Dr. Katja Rohwedder, MD\textsuperscript{1}, Dr. Shamik Parikh, MD\textsuperscript{2}, Dr. Eva Johnsson, MD\textsuperscript{3}, Dr. Andrea Traina, PharmD, BCPS, BCACP\textsuperscript{4}; (1)AstraZeneca, Wedel, Germany; (2)AstraZeneca, Wilmington, DE; (3)AstraZeneca, Mölndal, Sweden; (4)AstraZeneca, Fort Washington, PA

**Gastroenterology**

95E. Discordance between patient and healthcare provider reports of the burden of opioid-induced constipation. 
*Catherine Datto, MD, MS\textsuperscript{1}, Robert LoCasale, PhD, MS\textsuperscript{1}, Krista A. Payne, MEd\textsuperscript{2}, Chris Sexton, PhD\textsuperscript{3}, Karen Yeomans, BSc\textsuperscript{2}; (1)AstraZeneca Pharmaceuticals, Wilmington, DE; (2)United BioSource Corporation, an Express Scripts Company, Montreal, QC, Canada; (3)Evidera, Bethesda, MD*

**Hematology/Anticoagulation**

103. Analysis of New Oral Anticoagulant Use in Clinical Practice. 
*Jared Sheley, Pharm.D., BCPS, Crystal Hoffmann, Pharm.D., BCPS, CACP; St. Luke's Hospital, Chesterfield, MO*

*Stuart Greaser, PharmD\textsuperscript{1}, Carmen B. Smith, PharmD, BCPS\textsuperscript{1}, Matthew J. Korobey, PharmD, BCPS\textsuperscript{2}; (1)St. Louis College of Pharmacy, St. Louis, MO; (2)Mercy Hospital St. Louis, St. Louis, MO*

106. Evaluation of Anti-Platelet Factor-4 Laboratory Test Ordering in the Cardiovascular Intensive Care Unit. 
*Dr. Kajal Patel, PharmD; Department of Pharmacy, Cleveland Clinic, Cleveland, OH*

107. Achievement of therapeutic anticoagulation with implementation of a new heparin dosing nomogram and monitoring with the anti-factor Xa assay. 
*Harpreet Benipal, PharmD\textsuperscript{3}, Todd E. Gundrum, PharmD, BCPS\textsuperscript{1}, Rose Jung, PharmD, MPH, BCPS\textsuperscript{2}; Julie A. Murphy, PharmD, BCPS, FASHP, FCCP\textsuperscript{2}; (1)Department of Pharmacy Services, University of Toledo Medical Center, Toledo, OH; (2)University of Toledo College of Pharmacy, Toledo, OH*

108. Effect of a comprehensive anticoagulation management program on attainment of therapeutic INRs following orthopedic surgery. 
*J. Bradley Williams, PharmD, BCPS\textsuperscript{1}, Dr. Brian Kurtz, PharmD, BCACP\textsuperscript{2}, Mariam Hamadi, PharmD Candidate\textsuperscript{3}, Kristen T. Pogue, PharmD, BCPS (AQ CV)\textsuperscript{1}, Sarah Hanigan, PharmD, BCPS\textsuperscript{1}, Dr. Elizabeth Renner, PharmD, BCACP, BCPS\textsuperscript{2}, Janice Norville, MSN, MSBA, RN\textsuperscript{1}, James Froehlich, MD, MPH\textsuperscript{1}, Michael P. Dorsch, PharmD, MS, BCPS, (AQ, CV)\textsuperscript{1}; (1)University of Michigan Hospitals and Health Centers, Ann Arbor, MI; (2)Outpatient Anticoagulation Service, University of Michigan Hospitals and Health Centers, Ann Arbor, MI; (3)University of Michigan, College of Pharmacy, Ann Arbor, MI*

**HIV/AIDS**

110E. Switch from non-nucleoside reverse transcriptase inhibitor plus emtricitabine/tenofovir to elvitegravir/cobicistat/emtricitabine/tenofovir maintains HIV suppression and is well– tolerated. 
*Dr. Douglas Ward, MD\textsuperscript{1}, Dr. David Wheeler, MD\textsuperscript{2}, Dr. Aimee Wilkin, MD, MPH\textsuperscript{3}, Dr. John Rublein, PharmD\textsuperscript{4}, Dr. Will Garner, PhD\textsuperscript{5}, Dr. William Guyer, PharmD\textsuperscript{6}; (1)Dupont Circle Physicians Group, Washington, DC;*
Medication Safety

131. Risky research: perceptions and practices to improve safety in an investigational drug service.
Jennifer Cruz, PharmD, BCPS¹, Jamie Brown, PharmD, BCPS²; (1)Geriatric Research, Education, and Clinical Center, Durham VA Medical Center, Durham, NC; (2)Pharmacy Service, Durham VA Medical Center, Durham, NC

132. Acid suppression therapy in the hospital setting: An evaluation of the appropriateness of stress ulcer prophylaxis.
Dr. Lindsay Saum, PharmD, BCPS, CGP¹, Karen Samaan, PharmD, BCNSP²; (1)Department of Pharmacy Practice, Butler University, Indianapolis, IN; (2)St. Vincent Hospital Indianapolis, Indianapolis, IN

137. A multicenter evaluation of a trigger alert tool to prevent adverse drug events in the intensive care unit and general medical ward populations.
John DiPoto, PharmD¹, Dr. Mitchell S. Buckley, Pharm.D., FASHP, FCCM, BCPS¹, Dr. Sandra L. Kane-Gill, PharmD, MSc, FCCM, FCCP²; (1)Department of Pharmacy, Banner Good Samaritan Medical Center, Phoenix, AZ; (2)University of Pittsburgh School of Pharmacy, Pittsburgh, PA

Neurology

143E. VPA retains suppressive PPR effect at steady-state with less variability than CBZ: Retrospective analysis of 239 photosensitive clinic patients.
Ronald Reed, BS, RPh, PharmD¹, Dorothee Kasteleijn-Nolst Trenite, MD, PhD, MPH²; (1)Department of Pharmacy Practice, Hussun University School of Pharmacy, Bangor, ME; (2)Faculty of Medicine & Psychology, University of Rome "Sapienza" II, Roma, Italy

Oncology

147. The Association of Pro-inflammatory Biomarkers and Chemotherapy-Induced Cognitive Impairment in Asian Breast Cancer Patients: A Multi-centered, Prospective, Cohort Study.
Alexandre Chan, Pharm.D., MPH, BCPS, BCOP¹, Yin Ting Cheung, Ph.D.², Terence Ng, BScPharm(Hon)², Raymond Ng, MD²; (1)Department of Pharmacy, Faculty of Science, National University of Singapore, Singapore; (2)National University of Singapore; (3)National Cancer Centre Singapore

148E. Effects of body mass index on the efficacy and pharmacokinetics of granisetron transdermal system.
James Gilmore, PharmD¹, Christine Brown, RN, BSN, MA², Deborah Braccia, RN, MPA, PhD²; (1)Georgia Cancer Specialists; (2)Prostrakan, Inc

Other

150. Physicians' experiences, attitudes and expectations regarding pharmacists' provision of pharmaceutical care in Algeria.
Dr. Iman Amrani, M.Sc\(^1\), Dr. Ahmed Awaisu, Ph.D.\(^2\), Ms. Dounia-Zed Menaceur, PharmD\(^1\), Ms. Manar Maalem, PharmD\(^1\); (1)Department of Pharmacy, Faculty of Medicine, University of Batna, Batna, Algeria; (2)College of Pharmacy, Qatar University, Doha, Qatar

151. Readability and Comprehensibility of Package Inserts for Antidiabetic Medications in Middle East. \textit{Mr. Emad Eldin Munsour, M.Pharm}\(^1\), Mohamed Azmi Ahmad Hassali, PhD\(^2\), Dr. Ahmed Awaisu, Ph.D.\(^3\); Dr. Sara Darwish, M.D.\(^4\), Dr. Einas Abdoun, B. Sc Pharm\(^4\); (1)Social and Administrative Pharmacy, School of Pharmaceutical Sciences, Universiti Sains Malaysia, Doha, Qatar; (2)School of Pharmaceutical Science, Universiti Sains Malaysia, Bayan Lepas, Malaysia; (3)College of Pharmacy, Qatar University, Doha, Qatar; (4)Hamad Medical Corporation

**Pharmacoeconomics/Outcomes**

161E. Differences in Infection Rates between Outpatient Hospital, Clinic and Home Infusion Settings for Patients with Primary Immunodeficiency Disorder (PIDD). Diane Ito, MA\(^1\), Yan Xiong, MS\(^1\), Xiaolan Ye, PhD\(^2\), Josephine Li-McLeod, PhD\(^1\); (1)Baxter HealthCare, Westlake Village, CA; (2)Baxter HealthCare, Deerfield, IL

**Pharmacogenomics/Pharmacogenetics**

166. Knowledge and Attitudes Survey Among Healthcare Professionals on the Implications of Pharmacogenetics. Ms. Dania Alkhiyami, B.Pharm\(^1\), Ms. Dima Alsahan, B.Pharm\(^1\), Dr. Hazem Elewa, PhD, RPh, BCPS\(^2\), Mr. Ahmed AbdElbari, B.Pharm\(^3\); (1)College of Pharmacy, Qatar University, Doha, Qatar; (2)Qatar University, Doha, Qatar; (3)HMC Pharmacy, HMC, Doha, Qatar

170. Escitalopram pharmacogenetics: association between CYP2C19 and tolerance to a forced dose titration schedule in the treatment of Autism Spectrum Disorders (ASD). \textit{Jeffrey Bishop, PharmD, MS, BCPP}\(^1\), Fedra Najjar, MD\(^2\), Leah Rubin, PhD\(^2\), Thomas Owley, MD\(^3\), Stephen Guter, MS\(^4\), Edwin Cook Jr., MD\(^5\); (1)Department of Pharmacy Practice, University of Illinois at Chicago, Chicago, IL; (2)Department of Psychiatry, University of Illinois at Chicago; (3)Department of Psychiatry, Rush University Medical Center; (4)Department of Psychiatry

**Pharmacokinetics/Pharmacodynamics/Drug Metabolism/Drug Delivery**

174E. Effect of Alcohol on Clopidogrel Metabolism: Identification of a New Alcohol-Dependent Pathway. \textit{S. Casey Laizure, Pharm.D.}, Robert B. Parker, Pharm.D., Zheyi Hu, Ph.D., Vanessa Herring, B.S.; Department of Clinical Pharmacy, University of Tennessee College of Pharmacy, Memphis, TN

319. Levetiracetam Pharmacokinetics in Subarachnoid Hemorrhage Patients with Augmented Renal Clearance: A Monte Carlo Simulation. \textit{Dr. Casey May, PharmD}, Dr. Shaily Arora, Pharm.D., Dr. Sara Parli, PharmD, Dr. Melissa Thompson Bastin, PharmD, Dr. Aaron Cook, PharmD; Department of Pharmacy, University of Kentucky HealthCare, Lexington, KY

**Transplant/Immunology**
193E. Long Term Safety, Efficacy, Tolerability, and Pharmacokinetics of Recombinant Human Hyaluronidase-Facilitated Subcutaneous Infusion of Immunoglobulin G: A Phase 3 Extension Study in Patients with Primary Immunodeficiencies.

Isaac Melamed, MD¹, Richard Wasserman, MD, Ph.D², Mark Stein, MD³, Arye Rubinstein, MD, Ph.D⁴, Jennifer Puck, MD⁵, Sudhir Gupta, MD, Ph.D, MACP⁶, Werner Engl, MD⁷, Heinz Leibl, Ph.D⁷, Leman Yel, MD⁹, Richard Schiff, MD, Ph.D⁹; (1)IMMUNOe Health Centers, Centennial, CO; (2)DallasAllergyImmunology, Dallas, TX; (3)Allergy Associates of the Palm Beaches, North Palm Beach, FL; (4)Albert Einstein College of Medicine and Montefiore Hospital, Bronx, NY; (5)University of California, San Francisco, San Francisco, CA; (6)University of California, Irvine, Irvine, CA; (7)Baxter Healthcare, Vienna, Austria; (8)Baxter Healthcare, Westlake Village, CA

Women's Health

202. Pharmacokinetics of hydralazine in pregnancy.

*Michael Cusumano, PharmD*¹, Rachel Ryu, Pharm.D², Thomas Easterling, MD³, Danny Shen, PhD², Ken Thummel, PhD⁴, Mary Hebert, Pharm.D, FCCP⁵; (1)St. John's Hospital, Springfield, IL; (2)Department of Pharmacy, University of Washington, Seattle, WA; (3)Department of Obstetrics & Gynecology, University of Washington, Seattle, WA; (4)Department of Pharmaceutics, University of Washington, Seattle, WA

**CLINICAL PHARMACY FORUM**

These abstracts describe the delivery, development, justification, or documentation of an innovative clinical pharmacy service; they may be descriptive only and need not contain an evaluative component.

**Adult Medicine**

204. Expansion of clinical pharmacy services through a team-based approach to improve patient transitions across different levels of care.


**Ambulatory Care**

216. Design and implementation of a large integrated healthcare system ambulatory management of anticoagulation therapy utilizing a registered nurse-pharmacist model.

*Dr. Jessie Lish, PharmD, BCPS*¹, Dr. Brad Myers, PharmD, MBA, BCPS², Mrs. Cheryl Weimer, RN, BSN³, Mrs. Mary Morin, RN, MSN, BSN, NEA-BC, RN-BC⁴, Dr. Eric Lipton, MD⁴; (1)Ambulatory Clinical Pharmacy, Sentara Healthcare System—Sentara Medical Group, Norfolk, VA; (2)Department of Pharmacy, Sentara Healthcare System, Norfolk, VA; (3)Department of Nursing, Regulatory and Compliance, Sentara Healthcare System—Sentara Medical Group, Norfolk, VA; (4)Sentara Healthcare System—Sentara Medical Group, Norfolk, VA

218. Hospitalizations and patient outcomes between a pharmacist-physician diabetes co-management service and usual care.
Cardiovascular

222. Collaboration between inpatient and outpatient pharmacy departments to improve 30-day all cause readmission for patients with acute myocardial infarction.

Dr. Lindsay Arnold, PharmD, Mr. James Palatty, RPh, Mr. Man Lam, RPh, Dr. Sylvia Chan, PharmD;
Department of Pharmacy, Boston Medical Center, Boston, MA

Clinical Administration

226. Discharge medication reconciliation by pharmacists to improve transitions following hospitalization.
Rebecca Sawyer, PharmD, BCPS, Jessica Odom, PharmD, BCPS, Jasmine Jennings, PharmD, BCPS;
Department of Pharmacy, Greenville Health System, Greenville, SC

Critical Care

233. Ergocalciferol supplementation in critically ill patients with vitamin D deficiency.
Dr. Mona Patel, PharmD1, Dr. Vivek Moitra, MD2; (1)Department of Pharmacy, NewYork-Presbyterian Hospital, Columbia University Medical Center, New York, NY; (2)Columbia University College of Physicians and Surgeons, NewYork-Presbyterian Hospital, Columbia University Medical Center, New York, NY

Education/Training

243. Pharmacy Student Interventions for Medicaid Patients during a Major Formulary Change.
Bradley M. Wright, PharmD, BCPS1, Haley M. Philippe, Pharm.D, BCPS2; Miranda R. Andrus, Pharm.D., BCPS3; (1)Auburn University, Harrison School of Pharmacy, Huntsville, AL; (2)Auburn University, Harrison School of Pharmacy, Brownsboro, AL; (3)Auburn University Harrison School of Pharmacy, Auburn, AL

Hematology/Anticoagulation

254. Warfarin Dose Requirements after Sleeve Gastrectomy Surgery.
Mr. Christopher M. Bland, PharmD, BCPS1, David A. Bookstaver, Pharm.D.2, Dr. Christos Hatzigeorgiou, MD3, Lori B. Sweeney, MD4; (1)Department of Clinical Pharmacy, Eisenhower Army Medical Center, Fort Gordon, GA; (2)Eisenhower Army Medical Center, Fort Gordon, GA; (3)Department of Internal Medicine, Eisenhower Army Medical Center, Fort Gordon, GA, GA; (4)Department of Internal Medicine; Division of Endocrinology and Metabolism, Virginia Commonwealth University, Richmond, VA

255. Retrospective cohort analysis to evaluate the adherence of institutional guidelines for pharmacologic VTE prophylaxis in hospitalized medically-ill patients.
Suhair Shawar, PharmD candidate3, Toby C. Trujillo, PharmD, BCPS (AQ Cardiology)4; (1)Skaggs School of Pharmacy and Pharmaceutical Sciences, University of Colorado Skaggs School of Pharmacy and
Pharmaceutical Sciences, Aurora, CO; (2) Department of Clinical Pharmacy, University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences, Aurora, CO

256. Review of the Appropriateness of Apixaban, Rivaroxaban, and Dabigatran Therapy.
Haley M. Phillippe, Pharm.D, BCPS\textsuperscript{1}, Bradley M. Wright, PharmD, BCPS\textsuperscript{2}, \textit{Miranda R. Andrus, Pharm.D., BCPS}\textsuperscript{3}, Kathryn Bowerman, PharmD Candidate\textsuperscript{4}, Breanna P. Tigue, PharmD Candidate\textsuperscript{4}; (1)Auburn University, Harrison School of Pharmacy, Brownsboro, AL; (2)Auburn University, Harrison School of Pharmacy, Huntsville, AL; (3)Auburn University Harrison School of Pharmacy, Auburn, AL; (4)Auburn University, Harrison School of Pharmacy

257. Pharmacist Evaluation of Anticoagulation Care Plans.
\textit{Dr. Elizabeth Renner, PharmD, BCACP, BCPS}, Dr. Brian Kurtz, PharmD, BCACP; Outpatient Anticoagulation Service, University of Michigan Hospitals and Health Centers, Ann Arbor, MI

258. Impact of a Pharmacist-Managed Target-Specific Oral Anticoagulation Service.
\textit{Dr. Brian Kurtz, PharmD, BCACP}, Dr. Elizabeth Renner, PharmD, BCACP, BCPS; Outpatient Anticoagulation Service, University of Michigan Hospitals and Health Centers, Ann Arbor, MI

HIV/AIDS

263. Implementation of a mandatory pharmacy medication review consult for HIV/AIDS patients receiving antiretroviral therapy in an urban teaching hospital.
\textit{Dr. Aaron Hoffman, PharmD}, Dr. Kersten Weber-Tatarelis, PharmD; Department of Pharmacy, Advocate Illinois Masonic Medical Center, Chicago, IL

Infectious Diseases

267. Impact of 72-hour antibiotic time-out pharmacy protocol on Pseudomonas aeruginosa therapy in sub-urban and rural community hospital network.
\textit{Immanuel Ijo, PharmD}, Ruth Rabinovitch, MD, Jo Stuart, RPh, Allan Henrichs, MT (ASCP); Asante Health System, Medford, OR

Other

279. The Impact of a Clinical Pharmacist on the compliance of adult in-patient VTE Assessment within a General Hospital.
\textit{Mohamed Obiedalla, Master of Pharmacy (MPharm)}; Clinical Pharmacy, Al Wakra Hospital, Hamad Medical Corporation, Doha, Qatar

Pharmacogenomics/Pharmacogenetics

\textit{Kelly E. Caudle, Pharm.D., Ph.D.}\textsuperscript{1}, James M. Hoffman, Pharm.D., M.S.\textsuperscript{1}, Michelle Whirl-Carrillo, Ph.D.\textsuperscript{2}, Cyrine E. Haidar, Pharm.D.\textsuperscript{1}, Kristine R. Crews, Pharm.D.\textsuperscript{1}, Teri E. Klein, Ph.D.\textsuperscript{2}, Mary V. Relling, Pharm.D.\textsuperscript{1}; (1)Department of Pharmaceutical Sciences, St. Jude Children’s Research Hospital, Memphis, TN; (2)Department of Genetics, Stanford University
288. Development of an elective pharmacogenomics rotation for post-graduate year one and year two pharmacy residents. Dr. Fayth Edillor, PharmD\textsuperscript{1}, Dr. Gina Caliendo, PharmD, BCPS\textsuperscript{1}, Dr. Joanne Meyer, PharmD\textsuperscript{1}, Dr. Erwin Bottinger, MD\textsuperscript{2}, Dr. Omri Gottesman, MD\textsuperscript{2}, Dr. Aniwaa Owusu Obeng, PharmD\textsuperscript{2}; (1)Pharmacy Department, The Mount Sinai Hospital, New York, NY; (2)The Charles Bronfman Institute for Personalized Medicine, Icahn School of Medicine at Mount Sinai, New York, NY

RESIDENTS AND FELLOWS RESEARCH IN PROGRESS
These papers describe original research by residents and fellows in therapeutics, pharmacokinetics, pharmacodynamics, pharmacoepidemiology, and pharmacogenomics in which the research effort is ongoing.

ADR/Drug Interactions
290. The effect of warfarin-drug interactions on INR and the evaluation of dosage adjustments in hospitalized patients. Dr. Heather Mitchell, PharmD\textsuperscript{1}, Tina G. Hipp, Pharm.D.\textsuperscript{2}, Becky J. Szymanski, PharmD.\textsuperscript{2}; (1)Pharmacy Department, CMC-NorthEast, Concord, NC; (2)Department of Pharmacy, Carolinas Medical Center - NorthEast, Concord, NC; (3)Carolinas Medical Center - NorthEast, Concord, NC

Adult Medicine
293. Venous Thromboembolism Prophylaxis Following Total Hip or Knee Arthroplasty. Brittany Good, PharmD, Lindsay Hoffman, PharmD, BCPS, Stacey Dean, PharmD, BCPS; Virginia Commonwealth University Health System, Richmond, VA

294. Median Potassium Increases and the Effect of Patient-Specific Factors with Potassium Supplementation in Hospitalized Adults. Tina C. Lee, Pharm.D, MSCR\textsuperscript{1}, Rebecca L. Attridge, Pharm.D., MSc, BCPS\textsuperscript{2}, Jason M. Cota, Pharm.D., MSc\textsuperscript{1}, Cheryl K. Horlen, Pharm.D., BCPS\textsuperscript{1}, Russell T. Attridge, Pharm.D., MSc., BCPS\textsuperscript{3}; (1)University of the Incarnate Word Feik School of Pharmacy, San Antonio, TX; (2)The University of Texas Health Science Center at San Antonio, San Antonio, TX; (3)South Texas Veterans Health Care System, Audie L. Murphy Division, San Antonio, TX

Ambulatory Care
295. Feasibility of extended duration follow-up for patients receiving warfarin. Nick Carris, PharmD, BCPS, Steven Smith, PharmD, MPH, John Gums, PharmD, FCCP, Eric Dietrich, PharmD, BCPS; Department of Pharmacotherapy & Translational Research; Department of Community Health & Family Medicine, University of Florida, Gainesville, FL

296. Evaluation of a Pharmacist-Provided Discharge Counseling Service on Hospital Readmission Rates in the Mercy Hospital St. Louis Ambulatory Care Clinics. Megan Ziegler, Pharm. D.\textsuperscript{1}, Amy M. Drew, PharmD, BCPS\textsuperscript{1}, Jamie M. Pitlick, Pharm.D., BCPS\textsuperscript{1}, Margaret Edwards, D.O.\textsuperscript{2}; (1)St. Louis College of Pharmacy, St. Louis, MO; (2)Mercy Hospital St. Louis

Yennie Quach, Pharm.D.,1 Michel Daher, Pharm.D.,1 Samaneh Zhian, BS, MS1, Matthew Atkinson, BA1, Jessina C. McGregor, PhD2, Harleen Singh, PharmD, BCPS2; (1)College of Pharmacy, Oregon State University/Oregon Health & Science University, Portland, OR; (2)Oregon State University/Oregon Health Science University, College of Pharmacy, Portland, OR

298. Maintaining hypertension control: one-year post shared medical visit.
Dr. Barakha Yadav, Pharm.D.,1 Dr. Sierra Thompson, Psy.D., Cole Kildow, Pharm.D., MSHA, BCACP, CDE3, Dr. LaDonna Saxon, Ph.D., Dr. Crystal Brown, Pharm.D., BCPS, Mr. Harry Scher, MS, APRN; (1)School of Pharmacy, Texas Tech University Health Sciences Center/Dallas VA Medical Center, Dallas, TX; (2)Texas Tech UHSC School of Pharmacy, Dallas, TX

299. Improving Transitions of Care through Comprehensive Medication Management.
Andrea Rosenberg, Pharm.D.,1 Todd Sorensen, Pharm.D.,2 Sarah Westberg, Pharm.D., BCPS1, Lindsay Sorge, Pharm.D., MPH, BCACP2; (1)University of Minnesota College of Pharmacy, Minneapolis, MN; (2)Pharmaceutical Care & Health Systems, University of Minnesota College of Pharmacy, Minneapolis, MN

Cardiovascular

300. Outcomes associated with prothrombin complex concentrates.
Ashley Hedges, PharmD1, James C. Coons, PharmD1, Roy Smith, MD2; (1)University of Pittsburgh School of Pharmacy/University of Pittsburgh Medical Center, Pittsburgh, PA; (2)University of Pittsburgh School of Medicine/University of Pittsburgh Medical Center Cancer Pavillion, Pittsburgh, PA

301. Impact of Digoxin use in Veterans with Heart Failure with Reduced Ejection Fraction.
Kirsten M. Roberts, Pharm.D.1, Robert W. Savage, Pharm.D.1, Robert B. Parker, Pharm.D.2, Shannon W. Finks, Pharm.D.2, Kelly C. Rogers, Pharm.D.2; (1)Department of Clinical Pharmacy, Veterans Affairs Medical Center, Memphis, TN; (2)Department of Clinical Pharmacy, University of Tennessee College of Pharmacy, Memphis, TN

Critical Care

302. Effect of Methocarbamol on Acute Pain Following Trauma.
Ohoud Aljuhani, PharmD3, Asad Patanwala, PharmD2, Brian Kopp, PharmD3; (1)University of Arizona College of Pharmacy:Department of Pharmacy Practice, University of Arizona Medical Center, University Campus, Tucson; (2)Pharmacy Practice and Science, The University of Arizona College of Pharmacy, Tucson, AZ; (3)University of Arizona Medical Center-University Campus

Education/Training

303. Phase 3: pharmacy resident perceptions with involvement in simulation training of code skills.
Dr. Philip K. King, PharmD1, Mr. Jeffrey Schneiderman, NREMT-P, EMS-I2, Dr. Michael J. Peeters, PharmD, MEd, BCPS3; (1)The University of Toledo Medical Center, Toledo, OH; (2)University of Toledo Interprofessional Immersive Simulation Center; (3)University of Toledo College of Pharmacy, Toledo, OH

Emergency Medicine
304. Antibiotic resistance patterns of discharged emergency medicine patients in an academic teaching institution.

Dr. Megan Kunka, PharmD, Dr. Jessica Winter, PharmD, BCPS, Dr. Madeline Foertsch, PharmD, BCPS, Dr. Nicole Harger, PharmD, BCPS; Department of Pharmacy, UC Health - University of Cincinnati Medical Center, Cincinnati, OH

305. Ketamine and Propofol versus Propofol Monotherapy for Procedural Sedation in the Emergency Department.

Timothy Roach, PharmD, Erik Feltz, PharmD; Meriter Hospital, Madison, WI

Geriatrics

306. Evaluation of aspirin prescribing practices for primary prevention in women over the age of 65 at an academic family practice clinic.

Alisyn Hansen, PharmD¹, Vanessa Stevens, PhD², Marisa Brailsford, PharmD², Dr. Timothy Farrell, MD³, Karen Gunning, Pharm.D.; (1)University of Utah Health Care, Salt Lake City, UT; (2)Pharmacotherapy Outcomes Research Center, University of Utah, Salt Lake City, UT; (3)Division of Geriatrics, University of Utah School of Medicine, Salt Lake City, UT; (4)University of Utah College of Pharmacy and School of Medicine, Salt Lake City, UT

Health Services Research

307. Evaluating the impact of pharmacist-provided telephonic MTM on emergency room utilization in home health patients.

Dr. Stephanie Kleyman, PharmD¹, Alan J. Zillich, PharmD¹, Heather A. Jaynes, RN, MS¹, Jason M. Sutherland, PhD², Margie E. Snyder, PharmD, MPH¹; (1)Department of Pharmacy Practice, Purdue University College of Pharmacy, Indianapolis, IN; (2)University of British Columbia, Centre for Health Services and Policy Research, Vancouver, BC, Canada; (3)Department of Pharmacy Practice, Purdue University College of Pharmacy, Indianapolis, IN

Hematology/Anticoagulation

308. Pharmacist-led Aspirin Discontinuation in Targeted Patients Receiving Combination Warfarin and Aspirin.

Allison Schroeder, Pharm.D., BCPS¹, Nathan Clark, Pharm.D., FCCP, BCPS², Samuel G. Johnson, PharmD, FCCP, BCPS, (AQ, -., Card)³, Thomas Delate, PhD, MS⁴; Daniel M. Witt, PharmD, FCCP, BCPS⁴; (1)Skaggs School of Pharmacy and Pharmaceutical Sciences - Clinical Pharmacy Research Team, University of Colorado - Kaiser Permanente Colorado, Aurora, CO; (2)Anticoagulation and Anemia Management Services, Kaiser Permanente Colorado, Aurora, CO; (3)Kaiser Permanente, Aurora, CO; (4)Kaiser Permanente Colorado, Aurora, CO

HIV/AIDS

309. Characterization of rilpivirine use in a human immunodeficiency virus (HIV) ambulatory infectious diseases clinic.
Dr. Teresa Cicci, PharmD, Dr. Patricia Fulco, PharmD, BCPS, FASHP, AAHIVP; Department of Pharmacy Services, Virginia Commonwealth University Health System, Richmond, VA

310. Refill claims data as a measurement tool for antiretroviral adherence in HIV-infected patients. *Wei Cheng Yuet, Pharm.D.*, Michelle Liedtke, Pharm.D., BCPS, Jamie Miller, Pharm.D., BCPS, Kevin Farmer, Ph.D., FAPhA, C. Ryan Tomlin, Pharm.D., BCPS, R. Chris Rathbun, Pharm.D., BCPS; Department of Clinical and Administrative Sciences, College of Pharmacy, University of Oklahoma Health Sciences Center, Oklahoma City, OK

311. Management of Hypertensive HIV-positive Patients in a Patient-Centered Medical Home. *Rebecca Hluhanich, PharmD¹*, Joy Vongspanich, PharmD¹, Machelle Wilson, PhD², Patricia Poole, PharmD¹; (1)Cares Community Health, Sacramento, CA; (2)University of California, Davis Medical Center, Sacramento, CA

**Infectious Diseases**

312. Oral Vancomycin Plus Intravenous Metronidazole Versus Oral Vancomycin in Severe Clostridium Difficile-Associated Diarrhea: A Single Center Study. *Dr. Grace Shyh, Pharm.D.¹*, Dr. Darko Todorov, Pharm.D.¹, Dr. Henry Cohen, Pharm.D.¹, Dr. Roya Mukhtarzad, M.D.², Dr. Steve Brooks, Ph.D.²; (1)Department of Pharmacy, Kingsbrook Jewish Medical Center, Brooklyn, NY; (2)Department of Medicine, Kingsbrook Jewish Medical Center, Brooklyn, NY

313. The Impact of Updated Initial Antibiotic Recommendations for Patients with Sepsis Presenting to the Emergency Department. *Dr. David Allen, PharmD*; Pharmacy Department, Cone Health, Greensboro, NC

314. Risk factors for resistant pathogens in community-dwelling pneumonia patients from 2001-2010. *Braden Adamson, Pharm.D.¹*, Russell T. Attridge, Pharm.D., MSc., BCPS²; (1)Department of Pharmacy Practice, University of the Incarnate Word Feik School of Pharmacy, San Antonio, TX; (2)South Texas Veterans Health Care System, Audie L. Murphy Division, San Antonio, TX

315. Empiric antibiotic appropriateness, combination therapy and clinical outcomes of critically-ill patients with Pseudomonas aeruginosa or Acinetobacter infections: a retrospective cohort analysis. *Dr. Jacob Beyer, Doctor of Pharmacy*; University of Colorado Hospital, Denver, CO

**Other**

316. Iron deficiency anemia: assessing pharmacists’ disease state knowledge, evaluation, and treatment options. *Jaclyn Viola, PharmD*; St. John’s University, Queens, NY

**Pediatrics**

317. Efficacy of Nebulized Fentanyl for the Palliation of Dyspnea in Pediatric Patients. *Dr. Titilola Afolabi, PharmD, BCPS*, Dr. Milap C. Nahata, MS, PharmD, FCCP, Dr. Vinita Pai, PharmD; Ohio State University College of Pharmacy, Columbus, OH

**Pharmacogenomics/Pharmacogenetics**
318. A CYP2C19 genotype guided dosing approach for optimizing voriconazole in patients with IFIs. Issam Hamadeh, PharmD, S. Schmidt, PhD, N. Mangal, PhD, Candidate, J. Hiemenz, MD, T. Langae, PhD, C. Peloquin, PharmD, L. Wiggins, PharmD, C. Arp, PharmD, K. Kinkler, PharmD, J. Johnson, PharmD.

Issam Hamadeh, Pharm.D.; Pharmacotherapy and translational Research, University of Florida, Gainesville, FL

Psychiatry

320. The Safety and Efficacy of Vortioxetine for Acute Treatment of Major Depressive Disorder: A Systematic Review and Meta-Analysis.

Dr. Amanda Meeker, PharmD1, Daniel Hartung, PharmD, MPH2, Dr. Megan Herink, PharmD3, Dr. Dean Haxby, PharmD1; (1)College of Pharmacy, Oregon State University, Portland, OR; (2)College of Pharmacy, Oregon State University, Portland, OR; (3)College of Pharmacy, Oregon State University/Oregon Health & Science University, Portland, OR

Transplant/Immunology

321. Evaluation of the cytomegalovirus prophylaxis regimen in high- and moderate-risk heart transplant recipients at Cleveland Clinic.

Sarah Petite, Pharm.D., Jodie Fink, Pharm.D., BCPS, Jennifer Sekeres, Pharm.D., BCPS (AQ-ID); Department of Pharmacy, Cleveland Clinic, Cleveland, OH

Women’s Health

322. Prednisone Pharmacokinetics in Pregnancy.

Rachel Ryu, Pharm.D1, Brooke Bennett, Undergraduate Student1, Thomas Easterling, MD2, Steve Caritis, MD3, Raman Venkataramanan, PhD4, Jason Umans, MD, PhD5, Menachem Miodovnik, MD6, Mahmoud Ahmed, PhD7, Shannon Clark, MD8, Ken Thummel, PhD9, Danny Shen, PhD9, Mary Hebert, Pharm.D, FCCP1; (1)Department of Pharmacy, University of Washington, Seattle, WA; (2)Department of Obstetrics & Gynecology, University of Washington, Seattle, WA; (3)Dept of OB/GYN/RS - Maternal-Fetal Medicine Division & Dept of Pediatrics, Magee-Women’s Hospital & Magee-Women’s Research Institute, Pittsburgh, PA; (4)Department of Pharmaceutical Sciences, University of Pittsburgh, Pittsburgh, PA; (5)MedStar Health Research Institute, Hyattsville, MD; Georgetown-Howard Universities Center for Clinical and Translational Science, Washington, DC; (6)Georgetown University Medical Center, Washington, DC; (7)Department of Obstetrics & Gynecology, Laboratory of Maternal & Fetal Pharmacology, Departments of Pharmacology & Toxicology and Human Biological Chemistry & Genetics, University of Texas Medical Branch, Galveston, TX; (8)Department of Ob/Gyn, University of Texas Medical Branch, Galveston, TX; (9)Department of Pharmaceutics, University of Washington, Seattle, WA

STUDENT SUBMISSIONS

These papers describe original research by students in therapeutics, pharmacokinetics, pharmacodynamics, pharmacoeconomics, pharmacoepidemiology, and pharmacogenomics in which the research effort is ongoing.

ADR/Drug Interactions
325. Co-administration of oral tetracyclines and fluoroquinolones with multivalent cations; student submission.

Ms. Taylor Stone, Student¹, Ms. Samantha Murrow, Student², P. Brandon Bookstaver, PharmD, BCPS (AQ-ID), AAHIVP³; (1)School of Pharmacy, South Carolina College of Pharmacy - USC Campus, Auburn, NH; (2)School of Pharmacy, South Carolina College of Pharmacy - USC Campus, Effingham, SC; (3)Department of Clinical Pharmacy & Outcomes Sciences, South Carolina College of Pharmacy, University of South Carolina, Columbia, SC

Clinical Administration

332. Impact of nurse-initiated withholding of insulin doses on patient blood glucose levels in the acute care cardiology and cardiovascular surgery population.

Laura Stokes, Pharm.D. Candidate, Jennifer A. Gass, Pharm.D., MS, BCPS; Pharmacy Department, Memorial Hermann-Texas Medical Center, Houston, TX

Community Pharmacy Practice

333. Use of a modified drug therapy concerns scale in community pharmacy practice: experiences of patients and pharmacists.

Amanda Kernodle, PharmD Candidate¹, Stephanie Kleyman, PharmD¹, Caitlin K. Frail, PharmD, MS, BCACP², Karen Pater, PharmD, BCPS, CDE³, Karen Hudmon, DrPH¹, Brad N. Doebbeling, MD, MSc⁴, Margie E. Snyder, PharmD, MPH⁵; (1)Purdue University College of Pharmacy; (2)University of Minnesota College of Pharmacy; (3)University of Pittsburgh School of Pharmacy; (4)Indiana University Purdue University Indianapolis School of Informatics and Computing; (5)Department of Pharmacy Practice, Purdue University College of Pharmacy, Indianapolis, IN

Critical Care

334. Institutional guideline compliance of initial antimicrobial doses in patients receiving continuous venovenous hemodialysis.

Tyler A. Vest, Pharm.D. Candidate 2016¹, Erin M. Roach, Pharm.D., BCPS², Seth R. Bauer, Pharm.D., BCPS²; (1)University of Cincinnati James L. Winkle College of Pharmacy, Cincinnati, OH; (2)Department of Pharmacy, Cleveland Clinic, Cleveland, OH

Drug Information

341. Biologics, the new face of modern medicine in the management of psoriasis.

Jiny Jimmy, B.S., Pharm.D. candidate¹, Ngoc-Anh Chau, Pharm.D. candidate¹, Deandra Romero, B.S., Pharm.D. candidate¹, Priya Toolsie, B.S., M.S., Pharm.D. candidate¹, Barry A. Bleidt, Ph.D., Pharm.D.²; (1)College of Pharmacy, Nova Southeastern University, Fort Lauderdale, FL; (2)Sociobehavioral and Administrative Pharmacy Department, College of Pharmacy, Nova Southeastern University, Fort Lauderdale, FL

Education/Training
344. Evaluation of student pharmacists’ participation in an interactive event to educate teens about substance abuse. 
Hoyi V. Chan, PharmD Candidate¹, Dr. Helen C. Pervanas, Pharm.D.²; (1)MCPS University, Manchester, NH; (2)Pharmacy Practice Department, MCPHS University, Manchester, NH

345. The impact of a Student College of Clinical Pharmacy-led United States Pharmacopeia <797> review on technician knowledge of aseptic technique.
Elizabeth Legros, Pharm.D. Candidate, Megan Elavsky, Pharm.D. Candidate, Brenda Hoang, Pharm.D. Candidate, Ulyana Telyeten, Pharm.D. Candidate, Aleta Smithbauer, Pharm.D. Candidate, Leah Dunnells, Pharm.D. Candidate, Mate Soric, Pharm.D., BCPS, Patrick J. Gallegos, Pharm.D., BCPS; Northeast Ohio Medical University, Rootstown, OH

346. Promoting Clinical Pharmacy: The Past, Present, and Future of the Student College of Clinical Pharmacy Organization at Northeast Ohio Medical University. 
Dustin Carneal, Pharm.D. Candidate, Elizabeth Legros, Pharm.D. Candidate, Patrick J. Gallegos, Pharm.D., BCPS; Northeast Ohio Medical University, Rootstown, OH

347. Optimal Sleep Pattern for Academic Success Among Student Pharmacists. 
Ms. Megan Zeek, PharmD Candidate 2015, Mr. Matthew Savioe, PharmD Candidate 2015, Mr. Matthew Song, PharmD Candidate 2015², Ms. Leanna Kennemur, PharmD Candidate 2015, Dr. JingJing Qian, PhD, Dr. Paul Jungnickel, PhD, RPh, Dr. Salisa Westrick, PhD; (1)Harrison School of Pharmacy, Auburn University Harrison School of Pharmacy, Auburn, AL

348. Sustainability of an Acute Care Pharmacy Developed, Intern-led Tetanus, diphtheria, and acellular pertussis (Tdap) Vaccination Cocooning Program.
Azhin Qadir, PharmD Candidate 2015¹, Chelsey Hess, PharmD Candidate 2016¹, Kristi Bronkan, PharmD, BCPS, Katherine Shihadeh, PharmD, Tara Vlasimsky, PharmD; (1)Acute Care Pharmacy, Denver Health Medical Center, Denver, CO

350. Measuring professionalism in third year pharmacy students before and after a professionalism workshop.
Stella Basalilov, Pharm.D. Candidate¹, Dimpa Choksi, Pharm.D. Candidate¹, Charmi Shah, Pharm.D. Candidate¹, Shareen El-Ibiary, Pharm.D., FCCP, BCPS, Samantha Karr, Pharm.D., BCPS, BCACP, BC-ADM; (1)Midwestern University College of Pharmacy – Glendale, Glendale, AZ

351. Evaluating survey results following a medication brown bag events targeting the geriatric patient population in Southern Nevada.
David Kim, PharmD Candidate¹, Danielle Chipchura, PharmD Candidate¹, Christina Madison, Pharm.D., BCACP², Renee Holder, PharmD, BCPS¹; (1)Roseman University of Health Sciences; (2)Roseman University of Health Sciences, Henderson, NV

**Emergency Medicine**

353. Integration of Pharmacy Interns in the Discharge Counseling of Intranasal Naloxone Rescue Kits in the Emergency Department.
Mr. Stephen Shaw, PharmD Candidate¹, Keyvan Nekouei, PharmD Candidate¹, Dr. Kevin Kaucher, PharmD²; (1)Acute Care Pharmacy, Denver Health Medical Center, Denver, CO; (2)Department of Pharmacy and Emergency Medicine, Denver Health Medical Center, Denver, CO
354. Evaluation of the Management of Hypertensive Crises in the Emergency Department at Memorial Hermann-Texas Medical Center. Lilian Ooi, Pharm.D. Candidate, Heather Hartman, Pharm.D., BCPS; Department of Pharmacy, Memorial Hermann-Texas Medical Center, Houston, TX

**Endocrinology**

355. The Impact of a Pharmacy-Initiated Inpatient Diabetes Patient Education Program. Sean Hackett, PharmD Candidate, Jangus B. Whitner, PharmD Candidate, Megan Gregory, PharmD Candidate, Anita T. Ridner, PharmD, Julie A. Murphy, PharmD, BCPS, FASHP, FCCP; University of Toledo College of Pharmacy, Toledo, OH

**Health Services Research**

359. Hospital Readmission: Review of the Evolving Role of the Pharmacists. Ms. Quyen Bach, B.S.N., PharmD. Candidate¹, Samuel K. Peasah, PhD, MBA, RPh²; (1)College of Pharmacy, Mercer University, Atlanta, GA; (2)Department of Pharmacy Practice, Mercer University College of Pharmacy, Atlanta, GA

360. Evaluation of pharmacist-provided women's health education seminars in the underserved female population. Sarah Nguyen, Pharm.D. Candidate¹, Jennifer Kohn, Pharm.D. Candidate¹, Laura Tsu, Pharm.D, BCPS, CGP², Kelsey Buckley, Pharm.D., BCACP³; (1)Midwestern University College of Pharmacy-Glendale, Glendale, AZ; (2)Department of Pharmacy Practice, Midwestern University-College of Pharmacy, Glendale, AZ; (3)Department of Pharmacy Practice, Midwestern University College of Pharmacy-Glendale, Glendale, AZ

**Hematology/Anticoagulation**

363. Comparative analysis of major bleeding associated with the use of new oral anticoagulants as compared to warfarin at a critical access hospital. Ms. Janelle Rychlick, MBA; School of Pharmacy, Pacific University School of Pharmacy, Sherwood, OR

**HIV/AIDS**

364. Effects of Renal Disease on Medication Errors in an HIV-infected Population in the Southeastern United States. Hana Rac, PharmD candidate¹, P. Brandon Bookstaver, PharmD, BCPS (AQ-ID), AAHIVP², Celeste Caulder, PharmD; (1)South Carolina College of Pharmacy, SC; (2)Department of Clinical Pharmacy & Outcomes Sciences, South Carolina College of Pharmacy, University of South Carolina, Columbia, SC

367. Pharmacist provided medication therapy management pilot program at a unique setting for a medically complex and aging human immunodeficiency virus positive population. Mr. Charles Patrick Callahan III, PharmD Candidate 2015, MS¹, Dr. Cheryl Abel, PharmD², Cheryl R. Durand, PharmD³, Ms. Lillye Ramos-Spooner, BS⁴, Linda Spooner, PharmD, BCPS⁵; (1)School of Pharmacy, MCPHS University - Worcester/Manchester, Manchester, NH; (2)Pharmacy Practice, Massachusetts College of Pharmacy and Health Sciences, Manchester, NH; (3)Massachusetts College of Pharmacy and
Health Sciences, Manchester, NH; (4) Greater Manchester AIDS Project, Manchester, NH; (5) School of Pharmacy-Worcester/Manchester, Massachusetts College of Pharmacy and Health Sciences University, Worcester, MA

445. The prevalence of HIV testing in pregnant women. 
Mrs. Emily Mantovani, BS¹, Ms. Rebecca Webb, BS¹, Ms. Elizabeth Price, BS¹, Dr. Michael Jiroutek, DrPH, MS², Dr. Melissa Johnson, PharmD, MHS, AAHIVP²; (1) College of Pharmacy & Health Sciences, Campbell University, Buies Creek, NC; (2) Department of Clinical Research, Campbell University, Buies Creek, NC

Infectious Diseases

370. Vancomycin combined with clindamycin for the treatment of acute bacterial skin and skin structure infections. 
Erin McCreary, PharmD. Candidate¹, Kurt Wargo, PharmD²; (1) Auburn University Harrison School of Pharmacy, AL; (2) Auburn University Harrison School of Pharmacy, AL

371. Modifying the risk factors associated with hospital-onset Clostridium difficile infections. 
Olivia Adams, PharmD Candidate¹, Kurt Wargo, PharmD²; (1) Auburn University Harrison School of Pharmacy, Hartselle, AL; (2) Auburn University Harrison School of Pharmacy, AL

373. Incidence of sternal wound infections and the implementation of a topical antibiotic paste protocol in cardiothoracic surgery patients. 
Eric Betka, PharmD Candidate¹, Jennifer Lee, PharmD, BCPS², Julie A. Murphy, PharmD, BCPS, FASHP, FCCP³, Vincent Mauro, PharmD, FCCP³, Todd E. Gundrum, PharmD, BCPS¹, Jessica Pakulski, PharmD, BCPS¹, Mark Bonnell, MD²; (1) Department of Pharmacy Services, University of Toledo Medical Center, Toledo, OH; (2) St. Vincent Hospital, Worcester, MA; (3) University of Toledo College of Pharmacy, Toledo, OH; (4) Department of Cardiothoracic Surgery, University of Toledo Medical Center, Toledo, OH

377. Literature Review for Aerosolized Antimicrobials in the Management of Multi-Drug Resistant Gram-Negative Hospital-Acquired Pneumonia. 
Ms. Lena Romaya, B.S., Ms. Diana Park, B.A., Ms. Sukhjit Kang, B.S., Fatima M. Ali, Pharm.D., BCPS; College of Pharmacy, Roosevelt University, Schaumburg, IL

381. Evaluation of infectious diseases pharmacists' interventions for patients receiving outpatient parenteral antimicrobial therapy after discharge from a large teaching hospital. 
Aaron Devanathan, PharmD Candidate 2016¹, Kathleen Sheridan, DO², Ryan Shields, PharmD, MS², Bonnie Falcione, PharmD, BCPS (AQ-ID)³; (1) University of Pittsburgh School of Pharmacy, Pittsburgh, PA; (2) UPMC Presbyterian Hospital, University of Pittsburgh School of Medicine, Pittsburgh, PA; (3) UPMC Presbyterian Hospital, University of Pittsburgh School of Pharmacy, University of Pittsburgh School of Medicine, Pittsburgh, PA

385. Increasing Patient Influenza Vaccination Rates in a County Health Department Tuberculosis Clinic. 
Danielle Chipchura, PharmD Candidate¹, Melissa Smith, PharmD Candidate³, Nightingale Meyou, PharmD Candidate¹, Elliott Asarch, PharmD Candidate³, Christina M. Madison, PharmD, BCACP, AAHIVP²; (1) Roseman University of Health Sciences; (2) Roseman University of Health Sciences, Henderson, NV

386. Infusion-related reactions secondary to polymyxin B in pediatric cystic fibrosis patients: a retrospective case series.
Michelle Pasciolla, PharmD Candidate¹, Kristin Bunt, PharmD Candidate¹, Julie Ann Justo, Pharm.D, MS, BCPS, AAHIVP¹, Rob Daniels, PharmD², Shadi Al-Jureidini, PharmD², P. Brandon Bookstaver, PharmD, BCPS (AQ-ID), AAHIVP²; (1)South Carolina College of Pharmacy, University of South Carolina, Columbia, SC; (2)Palmetto Health Hospital – Richland Campus, Columbia, SC; (3)Department of Clinical Pharmacy & Outcomes Sciences, South Carolina College of Pharmacy, University of South Carolina, Columbia, SC

**Medication Safety**

388. Assessment of Vincristine Safe Preparation and Administration in Riyadh Hospitals. 
*Mariyam Alfagih, Pharmacy student¹, Razan AlGhunaim, Pharmacy student¹, Nahla Alageel, M.Sc², Nagwa Ibrahim, Pharm D³; (1)King Saud University, Riyadh, Saudi Arabia; (2)Clinical pharmacy department, King Saud University, Riyadh, Saudi Arabia; (3)Prince sultan military medical city, Riyadh, Saudi Arabia

389. Barriers to Effective Medication Reconciliation: Pharmacists' Perspective in Riyadh hospitals, Saudi Arabia. 
*Ms. Waad Alghamdi, Pharm.D candidate¹, Ms. Hana Alalshaykh, Pharm.D candidate¹, Mrs. Weaam Aljassim, RPh, MHI In charge, Pharmacy Informatics, Ms. Ghada Bawazeer, M.Sc., Pharm.D, BCPS; (1)King Saud University

**Nutrition**

393. Quantitative Analysis of Caffeine Content in Popular Energy Drinks. 
*Keyvan Nekouei, PharmD Candidate¹, Farid Torabi, Pharm.D. Candidate 2015², Matthew Fete, PhD², Leticia Shea, PharmD²; (1)Acute Care Pharmacy, Denver Health Medical Center, Denver, CO; (2)Regis University School of Pharmacy

**Oncology**

*Laura A. Fuller, PharmD Candidate¹, Jessica Parra, PharmD, BCPS², Leslie A. Hamilton, PharmD, BCPS³; (1)University of Tennessee Health Science Center College of Pharmacy, Memphis, TN; (2)Methodist University Hospital, Memphis, TN; (3)The University of Tennessee Health Science Center, College of Pharmacy, Knoxville, TN

**Other**

*Bernice Man, Pharm.D. Candidate 2015¹, Kristine Manlimos, Pharm.D. Candidate 2016¹, Cindy Arocena Roberson, Pharm.D., BCACP²; (1)Chicago State University College of Pharmacy, Chicago, IL; (2)Department of Pharmacy Practice, Chicago State University College of Pharmacy, Chicago, IL

399. Awareness of an American College of Clinical Pharmacy state affiliate chapter. 
*Tyler A. Vest, Pharm.D. Candidate 2016¹, Caitlin M. Delabar, Pharm.D. Candidate 2016¹, Craig J. Furnish, Pharm.D. Candidate 2017¹, Karissa Y. Kim, Pharm.D., CACP, BCPS¹, Patrick J. Gallegos, Pharm.D., BCPS², Kenneth M. Komorny, Pharm.D., BCPS³, Andrea M. Pallotta, Pharm.D., BCPS, AAHIVP⁴; (1)University of Cincinnati James L. Winkle College of Pharmacy, Cincinnati, OH; (2)Northeast Ohio Medical University,
401. Pharmacy Literacy and Navigation (PLAN): An Interprofessional Approach to Conducting a Needs Assessment of Bexar County Seniors and Pharmacy Staff Encore.  
Crystal Howell, n/a; Steven Lee, n/a; Stephanie Mandujano, MPH; Meikwan Ralston, n/a; Linda Yang, n/a; Veronica Young, Pharm.D., MPH; (1)College of Pharmacy, The University of Texas at Austin, TX; (2)School of Public Health San Antonio Regional Campus, The University of Texas Health Science Center at Houston, TX

**Pain Management/Analgesia**

404. Evaluation of postoperative pain management system of patients after Laparoscopic Cholecystectomy in surgical wards of Bahawal Victoria Hospital.  
Mr. Ahsan Saleem, PharmD; Department of Pharmacy, The Islamia University of Bahawalpur, Bahawalpur, Pakistan

405. Continuous infusion ketorolac for post-operative pain after total knee arthroplasty.  
Amy Schwinghammer, PharmD Candidate; Sarah A. Nisly, PharmD; Alex Isaacs, PharmD; BCPS; Kellie Knight, PharmD; BCPS; Dan Sage, PharmD Candidate; (1)College of Pharmacy and Health Sciences, Butler University, Indianapolis, IN; (2)Butler University College of Pharmacy and Health Sciences & Indiana University Health, Indianapolis, IN; (3)Department of Pharmacy Practice, Purdue University College of Pharmacy, Indianapolis, IN; (4)Department of Pharmacy, IU Health Methodist Hospital, Indianapolis, IN; (5)College of Pharmacy, Purdue University, West Lafayette, IN

406. Systematic Literature Review of Randomized Controlled Trials to Evaluate the Efficacy of Medical Marijuana for Analgesia.  
Ms. Shiny Parsai, M.S., Pharm.D. candidate; Dr. Ronald Herman, PhD; Dr. Sarah Johnson, BCPS-AQ ID; (1)University of Iowa College of Pharmacy, Iowa City, IA; (2)APPLIED CLINICAL SCIENCES, University of Iowa College of Pharmacy, Iowa City, IA; (3)PATIENT CARE UNIT PHARMACISTS, The University of Iowa Healthcare, IA

407. Medication use evaluation of intravenous acetaminophen at an academic medical center.  
Andrew Decker, Pharm.D. Candidate 2015; Christopher Miller, Pharm.D., BCPS; (1)Wegmans School Of Pharmacy, St. John Fisher College, Rochester, NY; (2)SUNY Upstate Medical University Hospital, Syracuse, NY

408. Pain Management Prescribing by Race/ Ethnicity in a Level 1 Trauma Emergency Department.  
Mr. Darren Riley, Bachelor of Science; Xavier University College of Pharmacy, Xavier University College of Pharmacy, New Orleans, LA

**Pediatrics**

Ms. Hesty Ramadaniati, M.Clin.Pharm, Ya Lee, PhD.; Jeff Hughes, PhD.; School of Pharmacy, Curtin Health Innovation Research Institute, Curtin University, Perth, Australia

Pharmacogenomics/Pharmacogenetics

416. Association of Apolipoprotein E genotype and LDL levels in African American males with and without Type 2 Diabetes.
Dr. Gina J. Ryan, Pharm.D., CDE, Dr. Kathryn M. Momary, PharmD, BCPS, Ms. Lesly-Anne Samedy, M.S.; Department of Pharmacy Practice, Mercer University College of Pharmacy, Atlanta, GA

Pharmacokinetics/Pharmacodynamics/Drug Metabolism/Drug Delivery

Mr. Saeed Alzghari, M.B.A., M.S., Dr. Mark Reedy, M.D., Dr. Maureen Trotter, M.D., Dr. Nihn La-Beck, Pharm.D.; (1)Department of Immunotherapeutics and Biotechnology, Texas Tech University Health Sciences Center, Abilene, TX; (2)Hendrick Medical Center, Abilene, TX

418. Effects of verapamil and diltiazem on dabigatran etexilate hydrolysis by carboxylesterases.
Dina Ali, B.S., S. Casey Laizure, Pharm.D., Zheyi Hu, Ph.D., Robert B. Parker, Pharm.D.; (1)College of Pharmacy, University of Tennessee Health Science Center, Memphis, TN; (2)Department of Clinical Pharmacy, University of Tennessee College of Pharmacy, Memphis, TN

419. Comparison of Fentanyl Pharmacokinetics and Dose-Determining Factors in Adults and Children.
Sin Yin Lim, Pharm.D. Candidate, Peter Johnson, Pharm.D., BCPS, Jamie Miller, Pharm.D., BCPS, Sukyung Woo, Ph.D.; (1)College of Pharmacy, University of Oklahoma, Oklahoma City, OK; (2)Department of Pharmacy: Clinical and Administrative Sciences, University of Oklahoma College of Pharmacy, Oklahoma City, OK; (3)Department of Pharmaceutical Sciences, University of Oklahoma College of Pharmacy, Oklahoma City, OK

Substance Abuse/Toxicology

421. Attitudes and prevalence regarding prescription stimulant use among pre-health and health professions students: a cross-sectional study.
Mr. William Johnson, Student, Dr. Kristine Dolbeare, PhD, Dr. Robert Helmer II, PharmD, Dr. Paul Jungnickel, PhD, RPh; (1)Auburn University Harrison School of Pharmacy, Mobile, AL; (2)Auburn University Harrison School of Pharmacy, Auburn, AL

Transplant/Immunology

423. Path to developing a national student transplant organization.
Amanda Szczepanik, PharmD Candidate; School of Pharmacy, MCPHS University, Boston, MA
LATE BREAKERS
These papers describe original research in therapeutics, pharmacokinetics, pharmacodynamics, pharmacoeconomics, and pharmacoepidemiology.

Education/Training
430. Improvement in pharmacy students' confidence before and after an active learning simulation-based activity. 
José Barboza, Pharm.D., C.D.E.¹, Dawn Schocken, Ph.D.²; (1)Pharmacotherapeutics and Clinical Research, University of South Florida College of Pharmacy, Tampa, FL; (2)USF Health Morsani College of Medicine, Tampa, FL

Health Services Research
433. Primary Care Prescriber Understanding, Perceptions, and Utilization of Medication Copay Coupons. 
Cara Liday, Pharm.D., BCPS, CDE¹, Alan Pannier, PharmD, MBA², Rex W. Force, Pharm.D., BCPS, FCCP³; (1)Department of Pharmacy Practice, Idaho State University, Pocatello, ID; (2)Idaho State University; (3)Department of Family Medicine, Departments of Family Medicine and Pharmacy Practice, Idaho State University, Pocatello, ID

Oncology
438. Metformin and Pancreatic Cancer Risk in Type 2 Diabetic Patients: a Systematic Review and Meta-analysis. 
Ms. Yanmo Liu, master; the pharmaceutical department of shaw run run hospital, Shaw Run Run Hospital, hangzhou

Pharmacokinetics/Pharmacodynamics/Drug Metabolism/Drug Delivery
443E. Validation of a Dosing Strategy for Cefazolin for Surgery Requiring Cardiopulmonary Bypass. 
Emily Heil, PharmD¹, Allison Hollis, PharmD¹, David Nicolau, PharmD², Patrick Odonkor, MD¹, Dr. Kerri Thom, MD³, Thomas Dowling, PharmD, PhD⁴; (1)University of Maryland Medical Center, Baltimore, MD; (2)Center for Anti-Infective Research and Design, Hartford, CT; (3)University of Maryland School of Medicine, Baltimore, MD; (4)Department of Pharmacy Practice and Science, University of Maryland, Baltimore, MD