

**29th ANNUAL RESEARCH
SHOWCASE AND AWARDS
RECOGNITION DAY**

FRIDAY, JANUARY 22ND, 2016



**UNIVERSITY OF FLORIDA
COLLEGE OF PHARMACY**

SCHEDULE OF EVENTS

9:00am – 11:00am	ORAL COMPETITION	HPNP G307
	<u>Junior Division</u>	
	9:00am Fatma Al-Awadhi	
	9:15am Weijing Cai	
	9:30am Justin Smith	
	<u>Levitt Division</u>	
	9:45am YoonYoung Choi	
	10:00am Yan Li	
	<u>Senior Division</u>	
	10:15am Mohammad Akbar	
	10:30am Nihal El-Rouby	
	10:45am Lei Wang	
11:45am - 12:45pm	Luncheon – Sponsors and Judges	HPNP 4307
12:00pm – 12:45pm	Students set-up Poster Presentations	HPNP Reception Hall
12:30pm	Refreshments available	HPNP Reception Hall
1:00pm – 3:00pm	POSTER COMPETITION	
4:00pm – 5:00pm	Keynote Address Rashmi Barbhaiya, Ph.D. <i>“Precision Medicine, R&D Productivity & Affordability of Medicines – Key Drivers of Pharma R&D”</i>	HPNP Auditorium
5:00pm - 7:00pm	Awards Reception Refreshments and Announcement of Winners	HPNP Reception Hall

JUDGES

ORAL COMPETITION

Rashmi Barbhaiya, Ph.D.
Clinical Pharmacologist
CEO, Dynametics, LLC

Mohan K. Raizada, Ph.D.
Distinguished Professor
Department of Physiology and
Functional Genomics
University of Florida

William J. Millard, Ph.D.
Former Associate Dean and Professor
Pharmacodynamics
College of Pharmacy
University of Florida

Amy Rosenberg, PharmD, BCPS
Residency Director
Shands Hospital
UF Health

Laura Peterson, Ph.D.
Adjunct Instructor
Department of Chemistry
University of Florida

A SPECIAL THANKS TO THIS YEAR'S SPONSORS

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Levitt Division, Oral Competition Sponsor
Gainesville, FL
Class of 1961

Debbie Klapp
Memorial Endowment

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Dr. Kerry S. Estes
Gainesville, FL
Class of 1982

POSTER COMPETITION (cont.)

54. **GSTZ1 Expression is Variable in Breast and Liver Cancer and Modulates the Potency of Dicholoacetate**
Presenter: Stephan Jahn (PharmD)
Authors: S. Jahn, M. Solayman, L. Gay, R. Lorenzo, T. Langaee, P. Stacpoole, M. James
55. **Application of Pharmacokinetic/Pharmacodynamic Modelling to Simulate Potential Differences in Bioequivalence Between Generic and Brand Name Anti-Epileptic Products**
Presenter: Zhaoyu Meng (Amy) (PharmD)
Authors: Z. Meng, L. Fang, L. Lesko, M. Trame, S. Schmidt
56. **Evaluation of the Appropriateness of Target Specific Oral Anticoagulant Selection and Monitoring in the Outpatient Setting**
Presenter: Kristin Rieser (PharmD)
Authors: K. Rieser, K. Vogel Anderson
57. **Integrating Genomics with Metabolomics Reveal Novel Genetic Signals Associated with Variability in the Blood Pressure Response to Thiazide Diuretics Treated Patients**
Presenter: Mohamed Shahin (PharmD)
Authors: M. Shahin, D. Rotroff, Y. Gong, T. Langaee, C. McDonough, A. Beitelshees, T. Garrett, Z. Whang, J. Gums, A. Motsinger-Reif, A. Chapman, E. Boerwinkle, S. Turner, R. Frye, O. Fiehn, R. Cooper-Dehoff, R. Kaddurah-Daouk, J. Johnson
58. **Therapeutic Target Validation of Cytarabine Response Genes in Acute Myeloid Leukemia**
Presenter: Miyoung Shin (PharmD)
Authors: M. Shin, L. Chauhan, X. Cao, K. Crews, S. Pounds, J. Lamba
59. **Nitroxoline: A Broad-Spectrum Bacterial Biofilm-Eradicating Agent that Demonstrates Efficacy in an Ex Vivo Skin Wound Infection Model**
Presenter: Minh Thu Nguyen (Undergraduate Student)
Authors: M. Nguyen, Y. Abouelhassan, Q. Yang, G. Schultz, R. Huigens

JUDGES

POSTER COMPETITION

- Jane V. Aldrich, Ph.D.**
Professor
Medicinal Chemistry
College of Pharmacy
University of Florida
- Jürgen Bulitta, Ph.D.**
Associate Professor
Pharmaceutics
College of Pharmacy
University of Florida
- John Gums, Pharm.D.**
Associate Dean for Clinical Affairs
College of Pharmacy
University of Florida
- Alexander J. Grenning, Ph.D.**
Assistant Professor
Director of Experiential Programs
Department of Chemistry
University of Florida
- Leslie Hendeles, Pharm.D.**
Professor
College of Pharmacy
Professor of Pediatrics (Pulmonary),
Pharmacotherapy & Translational Research
College of Medicine
University of Florida
- Michael Katovich, Ph.D.**
Professor
Pharmacodynamics
College of Pharmacy
University of Florida
- Carole Kimberlin, Ph.D.**
Professor Emeritus
Pharmaceutical Outcomes and Policy
College of Pharmacy
University of Florida
- Kenneth P. Klinker, Pharm.D.**
Clinical Associate Professor
Pharmacotherapy & Translational Research
College of Pharmacy
University of Florida
- Larry Lopez, Pharm.D., FCCP, BCPS**
Professor Emeritus of
Pharmacy and Medicine
Pharmacotherapy & Translational Research
College of Pharmacy
University of Florida
- John Markowitz, Pharm.D., BCPP**
Professor
Pharmacotherapy & Translational Research
College of Pharmacy
University of Florida
- Jay McLaughlin, Ph.D.**
Associate Professor
Pharmacodynamics
College of Pharmacy
University of Florida
- Thomas Schmittgen, Ph.D.**
Professor
Pharmaceutics
College of Pharmacy
University of Florida
- Yu-Jung "Jenny" Wei, Ph.D.**
Assistant Professor
Pharmaceutical Outcomes and Policy
University of Florida
- Hong Xiao, Ph.D.**
Professor
Pharmaceutical Outcomes and Policy
College of Pharmacy
University of Florida
- William Cary Mobley, Ph.D.**
Clinical Associate Professor
Pharmaceutics
College of Pharmacy
University of Florida

ORAL COMPETITION

LEVITT DIVISION

- #1** Presenter: **YoonYoung Choi**
Department: Pharmaceutical Outcomes and Policy
Research Title: A Dynamic Risk Model for Inpatient Falls: Are They Predictable?
- #2** Presenter: **Yan Li**
Department: Pharmaceutical Outcomes and Policy
Research Title: A Dynamic Risk Prediction Model for Hospital Associated Hyperkalemia: Model Development and Performance Evaluation

JUNIOR DIVISION

- #1** Presenter: **Fatma Al-Awadhi**
Department: Medicinal Chemistry
Research Title: Underwater Treasures: Chemical and Biological Characterization of Cathepsin Inhibitors from Marine Cyanobacteria
- #2** Presenter: **Xinyue Liu**
Department: Pharmaceutical Outcomes and Policy
Research Title: Discovery, Synthesis, and Biological Evaluation of Apratyramide, a Marine-derived Transcriptional Stimulator of VEGF-A
- #3** Presenter: **Justin Smith**
Department: Pharmacodynamics
Research Title: A Novel Look at the Role of AT1A Receptors in the PVN of the Hypothalamus in Neuroendocrine and Cardiovascular Regulation

SENIOR DIVISION

- #1** Presenter: **Mohammad Akbar**
Department: Pharmaceutics
Research Title: Alpha-1 Antitrypsin (AAT) Gene and Stem Cell Based Therapies for the Treatment of Osteoporosis
- #2** Presenter: **Nihal El-Rouby**
Department: Pharmacotherapy & Translational Research
Research Title: Using Genome-Wide Association Analysis Couples with Induced Pluripotent Stem Cells (iPSC) to Identify Genetic Markers of Resistant Hypertension
- #3** Presenter: **Lei Wang**
Department: Pharmacodynamics
Research Title: Brain Angiotensin Converting Enzyme 2 as a Novel Therapeutic Target for Anxiety Disorders

POSTER COMPETITION (cont.)

- 44. Proinflammatory Effects of Increased Maternal Cortisol During Late Gestation on Fetal Epicardial Adipose Tissue in an Ovine Model**
Presenter: Adrian Mottley (PharmD)
Authors: A. Mottley, N. Dedaj
- 45. Novel Antibiotic Combinations to Target Resistant *Klebsiella pneumoniae* and *Escherichia coli***
Presenter: Emily McElhaney (PharmD)
Authors: E. McElhaney, E. Richards, M. Keller-Wood
- 46. Deciphering the Molecular Pathways Through Biomarkers Identification for Trastuzumab Resistance and Cardiotoxicity in HER2-positive Breast Cancer**
Presenter: Marianela Robainas (PharmD)
Authors: M. Robainas, D. Ivasechko, K. Thomas, L. Lawrence, S. Ait-Oudhia
- 47. Integrated Data Mining Approach and Systems Pharmacology to explore the Mechanism and the Prevention of Cisplatin-Induced Nephrotoxicity**
Presenter: Tyler Spink (PharmD)
Authors: T. Spink, C. Finnell, J. Giannantonio, S. Tu, D. Hawkins, J. John, F. Sanchez, M. Trame
- 48. CD33 SNPs as markers for identifying patients likely to be benefit from gemtuzumab, ozagomicin-a report from the Children's Oncology Group**
Presenter: Lata Chauhan (PharmD)
Authors: L. Chauhan, M. Shin, R. Aplenc, J. Pollard, J. Wang, T. Alonzo, A. Gamis, S. Meshinchi, J. Lamba
- 49. Insight into Opioid-Opioid Receptor Binding Through Analysis of Structural Data, Mutagenesis Studies, and SAR of Opioid Peptides**
Presenter: Michael Ferracane (PharmD)
Authors: M. Ferracane, J. Aldrich
- 50. Identifying Quality Gaps in ePrescribing through INCIPRE; Incorporating Community Pharmacy Quality Improvement and Meaningful Feedback into the ePrescribing Process**
Presenter: Jessica Gonzalez (PharmD)
Authors: J. Gonzalez
- 51. Development of a Systems Pharmacology Model to Predict the Effects of Warfarin and Rivaroxaban on the Human Coagulation Network**
Presenter: Sonja Hartmann (PharmD)
Authors: S. Hartmann, K. Biliouris, L. Lesko., U. Nowak-Gottl, M. Trame
- 52. Anticoagulation-related Quality of Life Associated with Extended-Interval Monitoring: A Pre-Specified Analysis of the FADE-OUT Study**
Presenter: Andrew Hwang (PharmD)
Authors: N. Carris, S. Smith, J. Taylor, K. Sando, J. Powell, A. Hwang, J. Gums, E. Dietrich, K. Vogel Anderson
- 53. Exposure to Social Defeat Stress Increases Morphine Consumption and Depression-like Behavior Mediated by the Endogenous Kappa Opioid System**
Presenter: Kristen Hymel (PharmD)
Authors: K. Hymel, J. Medina. S. Eans, M. Ganno, H. Stacy, J. McLaughlin

POSTER COMPETITION (cont.)

- 33. Trends in the Utilization of Warfarin and Non-Vitamin K Oral Anticoagulants in Elderly Patients with Atrial Fibrillation**
Presenter: Abdullah Alalwan (Pharmaceutical Outcomes and Policy/Graduate Student)
Authors: A. Alalwan, S. Voils, A. Hartzema
- 34. Impact of Work and Activity Limitations Attributable to Arthritis on Health Related Quality of Life of United States Veterans**
Presenter: Ghadeer Dawwas (Pharmaceutical Outcomes and Policy/Graduate Student)
Authors: G. Dawwas, H. Park
- 35. The Impact of Chronic Bronchitis on Depressive Tendencies in USA Adults: MEPS 2011**
Presenter: Xinyi Jiang (Pharmaceutical Outcomes and Policy/Graduate Student)
Authors: X. Jiang, H. Park
- 36. Factors Associated with Influenza Vaccination Uptake among Asthma Patients**
Presenter: Sascha van Boemmel-Wegmann (Pharmaceutical Outcomes and Policy/Graduate Student)
Authors: S. van Boemmel-Wegmann; H. Park
- 37. Association of Interferon-Based Therapy and Cardiovascular Disease in Chronic Hepatitis C Patients in U.S.**
Presenter: Wei Wang (Pharmaceutical Outcomes and Policy/Graduate Student)
Authors: W. Wang, H. Park
- 38. CFLAR Splicing SNP as Predictor of Chemo-sensitivity to Anticancer Drugs**
Presenter: Emilie Bergsma (PharmD)
Authors: E. Bergsma, L. Chauhan, J. Lamba
- 39. Preclinical Evaluations of Two Vascular Endothelial Growth Factor (VEGF) Inhibitors in Combination**
Presenter: Maher Chaar (PharmD)
Authors: M. Chaar, M. Ferraro, E. Johnson, M. Le Merdy, A. Brown, S. Ait-Oudhia
- 40. Daptomycin Medication Use Evaluation for Dosing and Administration Considerations**
Presenter: Karen Fong (PharmD)
Authors: K. Fong, J. Pardo
- 41. Urgent Need for Effective Antibiotic Combinations to Target Multidrug-resistant Pseudomonas aeruginosa and Acinetobacter baumannii**
Presenter: Jeff Kamta (PharmD)
Authors: J. Kamta, J. Tamayo
- 42. SNPs as Predictors of Chemo-sensitivity to Cytarabine**
Presenter: Sally Kassem (PharmD)
Authors: S. Kassem, E. Bergsma, J. Lamba
- 43. Association between Beta-1 Adrenergic Receptor Polymorphisms and Arrhythmia in Post-Operative Patients with Congenital Heart Disease**
Presenter: Brent Lovato (PharmD)
Authors: B. Lovato, B. Quang Duong, W. Stein, T. Langae, M. Bleiweis, L. Cavallari

POSTER COMPETITION

- 1. Can Drug-Drug Interactions Be Used to Inform Gene-Drug Interactions and Vice Versa?**
Presenter: Jiexin Deng (Pharmaceutics/Graduate Student)
Authors: J. Deng, C. Lagishetty, L. Lesko, H. Rogers, M. Pacanowski, S. Schmidt
- 2. A Novel Therapy for the Treatment of Lupus in Animal Models**
Presenter: Ahmed Elshika (Pharmaceutics/Graduate Student)
Authors: A. Elshikha, Y. Lu, M. Chen, M. Akbar, L. Zeumer, A. Ritter, Y. Yuan, L. Morel, S. Song
- 3. Anti-inflammatory Effect of Human Alpha 1 Antitrypsin**
Presenter: Ye Yuan (Pharmaceutics/Graduate Student)
Authors: Y. Yuan, Y. Li, D. Titov, B. Brenner, L. Seifer, A. Elshikha, M. Akbar, L. Zhou, S. Song
- 4. Late Gestation Maternal Hypercortisolemia Impairs Fetal Cardiac Function**
Presenter: Andrew Antolic (Pharmacodynamics/Graduate Student)
Authors: A. Antolic, J. Bright, E. Sumners, C. Wood, M. Keller-Wood
- 5. Transcriptomic Changes in the Placenta in Response to Chronic Maternal Hypercortisolemia**
Presenter: Serene Joseph (Pharmacodynamics/Graduate Student)
Authors: S. Joseph, E. Sumners, M. Keller-Wood
- 6. Oxytocin Regulation of Ethanol Intake and Accumbal Glutamate Levels in Mice**
Presenter: Kaley MacFadyen (Pharmacodynamics/Graduate Student)
Authors: K. MacFadyen, J. Smith, L. Wang, A. de Kloet, E. Krause, J. Peris
- 7. Acute Oxytocin Exposure Transiently Depolarizes Hilar Mossy Cells and CA3 Pyramidal Neurons**
Presenter: Max Russo (Pharmacodynamics/Graduate Student)
Authors: M. Russo, S. Harden, J. Frazier
- 8. Effects of Oxytocin on GABA circuits in the Lateral Septum**
Presenter: Sarthak Singhal (Pharmacodynamics/Graduate Student)
Authors: S. Singhal, J. Frazier
- 9. Pharmacogenetic Association of β_1 -adrenergic Receptor Ser49Gly Polymorphism with Outcomes in the Secondary Prevention of Small Subcortical Strokes (SPS3) Trial**
Presenter: Oyunbileg Magvanjav (Pharmacotherapy & Translational Research/Graduate Student)
Authors: O. Magvanjav, C. McDonough, Y. Gong, L. McClure, R. Horenstein; T. Field, R. Talbert, A. Shuldiner, B. Mitchell. O. Benavente, J. Johnson
- 10. Oxytocin Receptor Expressing Neurons Comprise a Prefrontal Cortex to Amygdala Circuit Implicated in Anxiety-like Behavior**
Presenter: Yalun Tan (Pharmacodynamics/Graduate Student)
Authors: Y. Tan, H. Hiller, J. Smith, L. Wang, S. Singhal, J. Frazier, A. de Kloet, E. Krause
- 11. Molecular Markers of Blood Pressure Response to Thiazide Diuretics Identified Through Whole Transcriptome RNA-Seq Analysis**
Presenter: Ana Caroline Costa Sa (Pharmacotherapy & Translational Research/Graduate Student)
Authors: A. Sa, A. Webb, Y. Gong, C. McDonough, T. Langae, S. Turner, A. Beitelshes, A. Chapman, E. Boerwinkle, J. Gums, S. Scherer, R. Cooper-DeHoff, W. Sadee, J. Johnson

POSTER COMPETITION (cont.)

12. **Evaluation of Metabolic Alteration Based on FLT3 Status in Pediatric Acute Myeloid Leukemia Patients by Serum Metabolomics**
Presenter: Bradley Stockard (Pharmacotherapy & Translational Research/Graduate Student)
Authors: B. Stockard, E. Dhummakupt, T. Garrett, J. Lamba
13. **A Novel Transcription Factor Increases Pancreatic Duct Formation During Experimental Acinar to Ductal Transdifferentiation**
Presenter: Ola Elgamal (Pharmaceutics/Graduate Student)
Authors: O. Elgamal, A. Azevedo-Pouly, J. Jiang, M. Badwai, T. Schmittgen
14. **Rates of Inactivation of Hepatic Cytosolic and Mitochondrial Glutathione Transferase Zeta 1 (GSTZ1) Following Oral Administration of Dichloroacetate Change with Age in a Rat Model**
Presenter: Marci Smeltz (Medicinal Chemistry/Graduate Student)
Authors: M. Smeltz, Z. Hu, G. Zhong, S. Jahn, L. Rowland-Faux, A. Shroads, P. Stacpoole, M. James
15. **Unidentified Protein(s) in Kidney Mitochondria Inhibit GSTZ1 Activity with Dichloroacetate**
Presenter: Guo Zhong (Medicinal Chemistry/Graduate Student)
Authors: G. Zhong, S. Jahn, M. Smeltz, Z. Hu, P. Stacpoole, M. James
16. **Discovery of Potent Halogenated Phenazine and Quinoline Small Molecule Biofilm-Eradicating Agents**
Presenter: Yasmeen Abouelhassan (Medicinal Chemistry/Graduate Student)
Authors: Y. Abouelhassan, A. Garrison, A. Basak, R. Huigens
17. **Peptide Ring Closing Metathesis: Minimizing Side Reactions in Aroclor Analogs**
Presenter: Solomon Gisemba (Medicinal Chemistry/Graduate Student)
Authors: S. Gisemba, J. Aldrich
18. **Discovery and Development of the Potent Marine-Derived Elastase Inhibitor Lyngbyastatin 7: Structure-Activity Relationship Studies, Total Synthesis and In Vitro Biological Evaluation in Model Systems**
Presenter: Danmeng Luo (Medicinal Chemistry/Graduate Student)
Authors: D. Luo, Q. Chen, H. Luesch
19. **Oxidative Stress-Activatable Double Prodrugs of HBED: Synthesis, Characterization, and Evaluation in Human Retinal Pigment Epithelial Cells**
Presenter: Nikki Thiele (Medicinal Chemistry/Graduate Student)
Authors: N. Thiele, K. Sloan
20. **Dihydroxy-acid Dehydratase, a Novel Target for Developing Antibiotics**
Presenter: Peilan Zhang (Medicinal Chemistry/Graduate Student)
Authors: P. Zhang, B. MacTavish, J. Nina, S. Bruner, Y. Ding
21. **Biochemical Characterization of Cryptic Microviridin Biosynthesis in Anabaena sp. PCC 7120**
Presenter: Yi Zhang (Medicinal Chemistry/Graduate Student)
Authors: Y. Zhang, Y. Ding

POSTER COMPETITION (cont.)

22. **Application of Microdialysis in Determination of Interstitial Concentration of Therapeutic Antibody Immunoglobulin**
Presenter: Vipada Khaowroongrueng (Pharmaceutics/Graduate Student)
Authors: V. Khaowroongrueng, S. Jadhav, H. Derendorf
23. **In Vitro Analysis of Trastuzumab Mechanism of Action in HER2-positive Breast Cancer alone or in Association with Paclitaxel in a Time Sequence Combination Chemotherapy**
Presenter: Maxime Le Merdy (Pharmaceutics/Graduate Student)
Authors: M. Le Merdy, S. Ait-Oudhia
24. **CRISPR CAS Generated microRNA 216/217 Knockout Mouse Model for Pancreas Tumorigenesis Study**
Presenter: Dhruvitkumar Sutaria (Pharmaceutics/Graduate Student)
Authors: D. Sutaria, A. Azevedo-Pouly, J. Jiang, X. Pu, V. Coppola, T. Schmittgen
25. **Model Guided Dose Optimization of Dichloroacetate for the Treatment of Congenital Lactic Acidosis**
Presenter: Naveen Mangal (Pharmaceutics/Graduate Student)
Authors: N. Mangal, A. Shroads, T. Langae, P. Stacpoole, S. Schmidt
26. **Characterization of Sigma-1 Receptor (S1R) Antagonist CM-304 and its Analog, AZ-66; Evaluating Novel Therapeutics with Reduced Liabilities for the Treatment of Allodynia and Induced Pain.**
Presenter: Thomas Cirino, (Pharmacodynamics/Graduate Student)
Authors: T. Cirino, S. Eans, J. Medina, C. Mesangeau, C. McCurdy, J. McLaughlin
27. **Pharmacokinetic and Pharmacodynamic Responses in Astronauts During International Space Station (ISS) Missions**
Presenter: Yichao Yu (Pharmaceutics/Graduate Student)
Authors: Y. Yu, J. Kast, L. Barger, M. Basner, Y. Bokrand-Donatelli, S. Smith, V. Wotring, H. Derendorf
28. **Population Parent-Metabolite PK Modeling for Acetaminophen Induced Hepatotoxicity**
Presenter: Sibo Jiang (Pharmaceutics/Graduate Student)
Authors: S. Jiang, T. Samant, C. Lagishetty, K. Madrasi, S. Schmidt
29. **Effect of Sample Size on Modified Chi-square Ratio Test for Comparison of Cascade Impactor Profiles of Inhaled Corticosteroids**
Presenter: Abhinav Kurumaddali (Pharmaceutics/Graduate Student)
Authors: A. Kurumaddali, L. Zhao, G. Hochhaus
30. **Development of Mechanistic Physiological-Based Pharmacokinetic (PBPK) Model for Shed Antigens on Membrane Bound Targets Following mAb Treatment**
Presenter: Yi Ting Lien (Kayla) (Pharmaceutics/Graduate Student)
Authors: Y. Lien, H. Yang, S. Basu, S. Ait-Oudhia, S. Schmidt
31. **Pharmacokinetic and Pharmacodynamic Modeling of Peptide YY (3-36) in Mice**
Presenter: Jie Shao (Pharmaceutics/Graduate Student)
Authors: J. Shao, G. Hochhaus
32. **A Semi-Mechanistic Model for Predicting the Nasal and Plasma Pharmacokinetics of Intranasal Corticosteroids**
Presenter: Uta Schilling (Pharmaceutics/Graduate Student)
Authors: U. Schilling, T. Miesler, B. Weber, G. Hochhaus