

# UF Drug Discovery Symposium – 2019

## TENTATIVE PROGRAM

Thursday 25<sup>th</sup> April

7.30 am – 8.30 am Registration & Breakfast (*Continental breakfast will be served; Posters will be set up*)

8.30 am – 8.55 am **Welcome Address and Introductory Remarks:**  
Hendrik Luesch, *Director, Center for Natural Products Drug Discovery and Development (CNP3)*  
Maureen Keller-Wood, *Associate Dean for Research and Graduate Education, UF College of Pharmacy*  
Jonathan Licht, *Director, UF Health Cancer Center (UFHCC)*

8.55 am – 9.40 am **KEYNOTE ADDRESS: Challenges and Opportunities for Natural Products and Drug Discovery in the Genomic Era**  
Ben Shen, *Professor, Director, Natural Products Initiative, Scripps Research, Jupiter, Florida*

9.40 am – 12.00 noon **SESSION 1: FROM GENOMES TO NATURAL PRODUCTS**

**Synthetic Biology Approaches for Translating Microbial Genomes into Chemicals**  
Yousong Ding, *Assistant Professor, Department of Medicinal Chemistry, University of Florida, Gainesville, FL*

**Structure and Mechanism of the Biosynthesis Pathway to Microbiome-Produced, Genotoxic Colibactins**  
Steve Bruner, *Professor, Department of Chemistry, University of Florida, Gainesville, FL*

**COFFEE BREAK** (*Refreshments will be served*)

**Discovery of the Tiancilactone Antibiotics by Genome Mining of Atypical Bacterial Type II Diterpene Synthases**  
Jeffrey Rudolf, *Assistant Professor, Department of Chemistry, University of Florida, Gainesville, FL*

**Discovery of Novel Bacterial Queuine Synthesis and Salvage Enzymes by Comparative Genomics**  
Valerie de Crecy-Laggard, *Professor, Department of Microbiology and Cell Science, University of Florida, Gainesville, FL*

**Harnessing Natural Product Biosynthetic Pathways from Actinomycetes**  
Amy Lane, *Associate Professor, Department of Chemistry, University of North Florida, Jacksonville, FL*

12.00 noon – 1.00 pm **LUNCH** (*Boxed lunch will be served*)

1.00 pm – 1.45 pm

**PLENARY 1 : Discovery of Selective Non-Small Cell Lung Cancer Toxins**

John McMillan, *Professor, Department of Chemistry and Biochemistry, University of California, Santa Cruz, CA*

1.45 pm – 5.45 pm

**SESSION 2: CANCER DRUG DISCOVERY AND TRANSLATION**

**Structurally Defined Fluorogenic Probe Enables High-Throughput Screening of Inhibitors for Heparanase**

Lina Cui, *Assistant Professor, Department of Medicinal Chemistry, University of Florida, Gainesville, FL*

**Combining Experimental and Computational Systems Pharmacological Approaches to Dissect Anti-Cancer Drugs Effects and Associated Toxicities**

Sihem Bihorel, *Assistant Professor, Department of Pharmaceutics, University of Florida, Orlando, FL*

**Targeting Polyamine Metabolism in Pancreatic Cancers**

Otto Phanstiel, *Professor, Department of Medical Education, University of Central Florida, Orlando, FL*

**COFFEE BREAK** (*Refreshments will be served*)

**Discovery of PROTAC Bcl-xL Degraders**

Guangrong Zheng, *Associate Professor, Department of Medicinal Chemistry, University of Florida, Gainesville, FL*

**Bcl-xL Proteolysis Targeting Chimeras are Potent Senolytic and Better Anti-cancer Agents**

Daohong Zhou, *Professor, Department of Pharmacodynamics, University of Florida, Gainesville, FL*

**Covalent Inhibitors of ER Stress Response: Cancer Can't Cope**

Juan Del Valle, *Associate Professor, Department of Chemistry, University of South Florida, Tampa, FL*

*Short Break (5 minutes)*

**On the Trail of a Killer of Metastatic Breast Cancer**

Brian Law, *Associate Professor, Department of Pharmacology and Therapeutics, University of Florida, Gainesville, FL*

**Genomic Approaches to Identify Markers Predictive of Response and Novel Targets in AML**

Jatinder Lamba, *Associate Professor, Department of Pharmacotherapy and Translational Research, University of Florida, Gainesville, FL*

**Screening for Novel Compounds and Discovering New Targets in Acute Myeloid Leukemia**

Christopher Cogle, *Professor, Department of Hematological Malignancies & Bone Marrow Transplantation, University of Florida, Gainesville, FL*

5.45 pm – 7.15 pm

**POSTER SESSION** (*Drinks and light refreshments will be available*)

## Friday 26<sup>th</sup> April

7.30 am – 8.30 am Registration & Breakfast (*Continental breakfast will be served*)

8.30 am – 9.15 am **PLENARY 2: Synthetic Sideromycins: Hijacking Microbial Iron Transport for Development of Targeted Antibiotics**  
Marvin Miller, *Professor Emeritus, Department of Chemistry & Biochemistry, University of Notre Dame, Notre Dame, IN*

9.15 am – 11.05 am **SESSION 3: ANTIBIOTICS AND INFECTIOUS DISEASE: FROM DISCOVERY TO THE CLINIC**

**Phenazine Antibiotic Inspired Discovery of Bacterial Biofilm-Eradicating Agents**

Robert Huigens, *Assistant Professor, Department of Medicinal Chemistry, University of Florida, Gainesville, FL*

**TB and not TB: Discovering New Drugs for Bad Bugs**

Kyle Rohde, *Associate Professor, Burnett School of Biomedical Sciences, University of Central Florida, Orlando, FL*

**COFFEE BREAK** (*Refreshments will be served*)

**Antibiotic Agents Developed Based on AApeptides**

Jianfeng Cai, *Professor, Department of Chemistry, University of South Florida, Tampa, FL*

***Title TBD***

Charles Peloquin, *Professor, Department of Pharmacotherapy and Translational Research, University of Florida, Gainesville, FL*

11.05 am – 12.10 pm **GRADUATE RESEARCH PRESENTATIONS** (*PhD candidates*)

12.10 pm – 1.10 pm **LUNCH** (*Boxed lunch will be served*)

1.10 pm – 1.50 pm **POSTGRADUATE RESEARCH PRESENTATIONS** (*Postdoctoral Fellows*)

1.50 pm – 2.35 pm **PLENARY 3: Development of Novel Therapeutics for Substance Use Disorders**  
Paul Kenny, *Professor, Department of Neuroscience, Icahn School of Medicine, Mt. Sinai, NY*

**COFFEE BREAK** (*Refreshments will be served*)

2.45 pm – 5.05 pm **SESSION 4: DRUG ABUSE AND PAIN**

**Characterization of ADME Properties of Mitragynine, the Major Alkaloid of *Mitragyna speciosa* (Kratom)**

Abhishek Sharma, *Research Assistant Professor, Department of Pharmaceutics, University of Florida, Gainesville, FL*

**Kratom Alkaloids: *In vitro* and *In vivo* Pharmacological Mechanisms**

Lance McMahon, *Professor, Department of Pharmacodynamics, University of Florida, Gainesville, FL*

**NOP-Related Agonists as a Treatment Option for Pain and Opioid Abuse in Non-Human Primates**

Holdon Ko, *Professor, Department of Physiology and Pharmacology, Wake Forest School of Medicine, Winston-Salem, NC*

*Short Break (5 minutes)*

**The Diversity of Cyclic Tetrapeptides: Structure-Activity Relationship Lessons Learned for Safer Analgesics**

Jane Aldrich, *Professor, Department of Medicinal Chemistry, University of Florida, Gainesville, FL*

**Refinement of Cyclic Tetrapeptide Multifunctional Opioid Agonist/Antagonists as Safer Analgesics and Treatments for Opioid Addiction**

Jay McLaughlin, *Associate Professor, Department of Pharmacodynamics, University of Florida, Gainesville, FL*

5.10 pm – 5.45 pm

**SPECIAL TOPIC: Intestinal Microbiota: The Barometer of Health and Disease**

Christian Jobin, *Professor, Department of Medicine, University of Florida, Gainesville, FL*

5.45 pm – 7.30 pm

**AWARD CEREMONY & RECEPTION**