2018 Department of Biochemistry Symposium

Sponsored by the Biochemistry Student Association and the Biochemistry Department

Tuesday, February 20, and Wednesday, February 21, 2018
**Tuesday, February 20th (Student Life Center)**

1:00-1:30 p.m. Poster Setup & Registration

1:40-3:00 p.m.

- **Heath Patterson - Post-doc, Caprioli Lab**
  Next generation histology-directed imaging mass spectrometry for rapid molecular characterization of 1000s of human kidney glomeruli

- **Christian Meyer - Graduate Student, Quaranta Lab**
  Quantifying Drug Synergy along Axes of Potency and Efficacy

- **Vivianne Morrison - Graduate Student, Carter Lab**
  Exploring the role of retinoic acid in postnatal oligodendrocytes

- **Frank Mason - Faculty, Kim Rathmell Lab**
  Loss of the tumor suppressor SETD2 leads to ultra-fine bridges during mitosis

3:00-3:10 p.m. Short Break

3:10-4:10 p.m.

- **Rodger Burcham - Graduate Student, Jackson Lab**
  Architecture of mammalian retromer dimers

- **Christi Salisbury-Ruf - Graduate Student, Zinkel Lab**
  Rip1 dependent necroptosis is involved in maintaining erythropoiesis

- **Aaron Fidler - Post-doc, Hudson Lab**
  The triple helix of collagens: a fundamental protein structure for storage and utilization of information in building scaffolds outside of cells

4:10-6:30 p.m. Poster Session / Wine & Cheese

**Wednesday, February 21st (Student Life Center)**

8:30-9:10 a.m. Breakfast / Registration

9:15-10:20 a.m.

- **Justin Marinko - Graduate Student, Sanders Lab**
  Identification of the Factors that Mediate Plasma Membrane Trafficking of Peripheral Myelin Protein 22

- **Andy Hale - Graduate Student, York Lab**
  Alterations in intestinal sulfur assimilation metabolism regulates iron homeostasis

- **Yi Ren - Faculty**
  Molecular determinants of mRNA nuclear export

10:20-10:30 a.m. Short Break

10:30-12:00 p.m.

- **Michael Goodman - Graduate Student, Marnett Lab**
  Dual cyclooxygenase-fatty acid amide hydrolase inhibitor exploits novel binding interactions in the cyclooxygenase active site

- **Matt Albertolle - Graduate Student, Guengerich Lab**
  Oxidative Regulation of Cytochromes P450

- **Elizabeth Gibson - Graduate Student, Osheroff Lab**
  Mechanism of Action of Mycobacterium tuberculosis Gyrase Inhibitors: A Novel Class of Gyrase Poisons

- **James Pino - Graduate Student, Lopez Lab**
  Automated inference of the mechanism of action of bendamustine using time-series multi-omic data
12:00 p.m. - 1:30 p.m. Lunch / Poster Session

1:30-2:30 p.m. Ray Blind - Faculty
Crystallographic and kinetic analyses of the human Inositol Polyphosphate Multikinase (IPMK) reveal intrinsic kinase auto-regulation mediated by disordered domains

Sarah Wessel - Post-doc, Cortez Lab
Identification and characterization of the replication fork proteome

Katie Rothamel - Graduate Student, Ascano Lab
Discovery of cellular targets of the IFIT antiviral RNA-binding protein family

2:30-2:40 p.m. Short Break

2:40-3:00 p.m. Chytil Award Remarks

3:00-4:00 p.m. Cunningham Award Talks

4:00-4:10 p.m. Short Break

4:10-5:10 p.m. Natasha Kozlyuk - Post-doc, Chazin Lab
Designing inhibitors for RAGE-ligand interactions using fragment-based molecular discovery approach

James Dewar - Faculty
Termination of vertebrate DNA synthesis

Timothy Scott - Graduate Student, Hodges Lab
TBD

5:10-7:00 p.m. Reception and Award Announcements at Student Life Center
Also Take Down Posters at this Time

Posters

1. Andy Hale – Graduate Student, York Lab
   Alterations in intestinal sulfur assimilation metabolism regulates iron homeostasis

2. Jonathan Attalla – Staff, Hodges Lab
   Leveraging cell-type specific DNA methylation patterns to identify genome-phenome relationships in non-coding regions

3. Johanna Schafer – Graduate Student, Pietenpol Lab
   Combination Treatment with Bromodomain and Extra-Terminal Motif Inhibitors (BETi) in Triple-Negative Breast Cancer (TNBC)

4. Alex Trevisan – Graduate Student, Carter Lab
   The role of Jedi in the development and function of sensory neurons

5. Archana Krishnamoorthy – Graduate Student, Cortez Lab
   RADX regulates RAD51 to control replication fork protection

6. Leonard Harris – Post-doc, Quaranta/Lopez Lab
   Bet Hedging as a Survival Strategy in Cancer Cell Populations

7. Evan Perry – Graduate Student, Fesik Lab
   Discovery of Small Molecule Inhibitors of the PD-1 Immune Checkpoint Pathway

8. Petria Thompson – Graduate Student, Cortez Lab
   HMCES/SRAP in DNA Replication and Repair
9. Lorena Infante – Graduate Student, Osheroff Lab
   Tailor-made oligonucleotides can stabilize type II topoisomerase-mediated DNA cleavage on cancer-specific sequences

10. Sarah Arcos – Graduate Student, Ascano Lab
    N6-methyladenosine-dependent regulation of RNA during Chikungunya virus infection and innate immune activation

11. Thomas Bass – Graduate Student, Cortez Lab
    Quantitative phosphoproteomics reveal mitotic function of the ATR-activating protein ETAA1

12. Adrian Olivares – Faculty
    Understanding nuclear mechanochemistry

13. Kareem Mohni – Post-doc, Cortez Lab
    TBD

14. Rose Follis – Graduate Student, Carter Lab
    Deletion of the p75 neurotrophin receptor in Schwann cells results in sensory neuron loss

15. Darren Tyson – Faculty, Quaranta Lab
    High-throughput, unbiased analysis of dose-dependent antiproliferative drug effects

16. Taha M Abdelkhale – Graduate Student, Cortez Lab
    Probing RADX protein interactions using affinity proteomics

17. Vaughn Thada – Graduate Student, Cortez Lab
    Mechanism of ATR activation by TOPBP1 and ETAA1

18. Remy Le Meur – Post-doc, Chazin Lab
    Expression, Purification and Initial Characterization of a Newly Discovered Replication Stress Response Protein: RadX

19. Jessican Moore – Post-doc, Caprioli Lab
    Ionic Liquid Matrices for Histology-Directed MALDI MS Analysis of Tissues

20. Blake A. Wilson – Post-doc, Lopez Lab
    Insight into the effects of tetralineoyl cardiolipin in mitochondrial membranes from all-atom molecular dynamics simulations

21. Lindsey Redman – Graduate Student, Pietenpol Lab
    Targeting the mutant p53 adaptive state in a triple negative breast cancer isogenic setting

22. Romell Gletten – Graduate Student, Schey Lab
    Proteomic characterization of aquaporin-5 protein-protein interactions and phosphorylation in the ocular lens

23. Bishal Paudel – Post-doc, Quaranta Lab
    To divide or die: drug response dynamics in BRAF-mutated melanoma cells

24. Wenpeng Liu – Post-doc, Cortez Lab
    Identification of ZNF280C as a novel fork stabilization protein

25. Clayton Marshall – Post-doc, Pietenpol Lab
    Cigarette Smoke Shifts the balance of p73 and p63 Expression in Airway Epithelial Cells

26. Scott Beeler – Graduate Student, Pietenpol Lab
    Tissue specific expression of p63 and p73 isoforms in humans and mice

27. Gabriela Santos Guasch – Graduate Student, Pietenpol Lab
    The role of p73 in hormonally regulated tissues
28. Maroof Khan Zafarr – Post-doc, Cortez Lab
   Investigating the Mechanism of ATR and Wee1 kinase inhibitors

29. Cheryl L. Law – Graduate Student, Sanders Lab
   TBD

30. Boone Prentice – Post-doc, Caprioli Lab
   Visualizing the Lipidome at Cellular Resolutions Using Imaging Mass Spectrometry

31. Hyojik Yang – Post-doc, Caprioli Lab
   Phosphopeptide enhancement in MALDI IMS Experiments

32. Danielle Gutierrez – Faculty, Caprioli Lab
   A High-throughput Omics Pipeline for Comprehensive Analysis of Challenged Human Cells

33. Keisha N. Hardeman – Post-doc, Quaranta Lab
   Fatty Acid B-oxidation in BRAF-mutated Melanomas Is Uncoupled From Proliferation

34. Nichole Lareau – Post-doc, Caprioli Lab
   MALDI Imaging Mass Spectrometry for the Study of Diabetic Kidney Disease in Zebrafish