



SCHOOL OF MEDICINE & DENTISTRY
UNIVERSITY of ROCHESTER MEDICAL CENTER

**2024 UR School of Medicine
Discover UR SMD Weekend**

Poster Session

**Saturday, March 2, 2024
11:00 am – 1:00 pm
Flaum Atrium**

Biochemistry & Biophysics

- 1. *Targeted pseudouridylation: An approach for suppressing nonsense mutations in disease genes***
Authors: **Hironori Adachi**, Yi Pan, Xueyang He, Jonathan L. Chen, Bart Klein, Gerard Platenburg, Pedro Morais, Paul L. Boutz, Yi-Tao Yu
- 2. *Examining the Role of Histone Demethylase KDM5B in Estrogen Receptor Positive Breast Cancer***
Authors: **Zachary Smith**, Christina Davidson, Ching-Hua Shih and Paula Vertino
- 3. *Translational Control of Cardiac Physiopathology via RBP***
Authors: Lindsey Wainwright, Omar Hedaya, Feng Jiang, **Peng Yao**
- 4. *A Tendon-on-a-Chip Model with Integrated Photonic Biosensors***
Authors: **Joseph Bucukovski**, Raquel Ajalik, Hossein Abolhassani, John Cognetti, Maya Moen, Benjamin Miller
- 5. *Investigating the Role of RNA Helicase in Splicing Changes caused by Cancer Associated SF3B1***
Authors: **Leon Harvey**, Mohammed Ali, Xueyang He & Paul Boutz
- 6. *Finite-size Effect on the Free Energy Landscape of Phase Separation in Lipid Bilayers Estimated Using Molecular Dynamics***
Authors: **Ashlin James Poruthoor**, Akshara Sharma, Jack J Stallone, Megan Miaro, Alan Grossfield
- 7. *High-throughput screening identifies EGLN family prolyl hydroxylases as important determinants of HCMV infection***
Authors: **Lucas Simpson**, Matthew Raymunda, Isaac Harris, Joshua Munger
- 8. *Disposable Photonics: Engineering Light for Triage at the Point-of-Care***
Authors: **Daniel J. Steiner**, Michael R. Bryan, Benjamin L. Miller
- 9. *Novel CRISPR screening pipeline identifies JUNB as an inflammatory anti-viral factor***
Authors: **Nicole Waield**, Jessica Ciesla, Joshua Munger

10. *Exploring diverse nucleosome binding modes of H1 subtypes*

Authors: **Nicholas R. Rugelis** and Jeffrey J. Hayes

11. *Regulation of transcription machinery by phosphorylation*

Authors: **Abby L. Manning** and Eric J. Wagner

12. *Application of Molecular Dynamics to Elucidate Key Binding Interactions for the Development of Therapeutics Against Opioid Overdose*

Authors: **Emily N. Robinson**, James M. Seckler, Stephen J. Lewis, Alan Grossfield

Biomedical Genetics & Genomics

13. *REV-ERBs Contribute to metabolic shifts in MYC driven cancers*

Authors: **Jamison B Burchett**, Rachel DeRollo, Siti Noor Ain Binti Ahmad Shahidan, Xueyang He, Molly Hulver, and Brian J. Altman

14. *The oncogene MYC as a driver of circadian clock disruption and dedifferentiation in the lung: implications in early lung carcinogenesis*

Authors: **Juliana Cazarin**, Jamison Burchett, Siti Noor Ain Binti Ahmad Shahidan, Rachel E. DeRollo, Brian J. Altman

15. *The Tole of H4K20me3 at Enhancers During TGF- β -Induced EMT in Breast Cancer*

Authors: **Bachelard Dieujuste**, Laura McLane, Ching-Hua Shih, Christina Davidson, Paula Vertino

Immunology, Microbiology & Virology

16. *(Submission Withdrawn)*

17. *Sars-cov-2 uses Rab5+ membranes to build replication organelles*

Authors: **Yuexuan Chen**, Susanne Klute, Konstantin Sparrer, and Ruth Serra-Moreno

- 18. *Characterization of CD4 and B cell heterogeneity in a pediatric population***
Authors: **Natalie Vance**, Ashay Narayana, Kirsi Järvinen-Seppo, Juilee Thakar
- 19. *Targeted radiation and IL-12 immunotherapy stimulate a systemic immune response to protect against pancreatic tumor recurrence***
Authors: **Tara G. Vrooman**, Angie Hughson, Gary Hannon, Bradley N. Mills, David C. Linehan, Scott A. Gerbe
- 20. *Gut microbe derived polyamines alter macrophage function and gene expression during S. aureus challenge***
Authors: **Emily A. Britt**, Steven R. Gill
- 21. *IFN-gamma induced microglial re-programming***
Authors: **Sophia Eliseeva**, Andrew Martin, Shilpi Giri, Samantha Kwok, Felix Yarovinsky
- 22. *An Acidic Tumor Microenvironment Disrupts Circadian Control of Macrophage Function***
Authors: **Amelia M. Knudsen-Clark**, Daniel W. Mwangi, and Brian J. Altman
- 23. *Mutations accumulated in the Spike of SARS-CoV-2 variants of concern allow for more efficient counteraction of the restriction factor BST2/Tetherin***
Authors: **Haley Aull**, Yuhang Shi, Sydney Simpson, Yuexuan Chen, Jared Benjamin, Ruth Serra-Moreno
- 24. *Characterizing Innate-like CD8+ T Cells in Early Life***
Authors: **Adam Geber**, Nathan Laniewski, Heidie Huyck, Gloria Pryhuber, David J. Topham, Kristin M. Scheible

Neuroscience

- 25. *PPP2R5D and its human de novo mutations in liprin-alpha 1 liquid-liquid phase separation and synaptic transmission***
Authors: **A. Mayer**, A. Ganguly, C. McKee, E. Spahn, R. Tartavardy, V. Janssens, R. Honkanen, S. Strack, H. Xia

- 26. *Timbre Encoding in the Inferior Colliculus: Exploring Neural Mechanisms***
Authors: **Johanna Fritzing** & Laurel Carney
- 27. *Neural subpopulations in marmoset area MTC show more extra-retinal tuning for saccade direction than area MT.***
Authors: **Amy Bucklaew**, Shanna Coop, Jude F. Mitchell
- 28. *Vibrotactile tuning of inhibitory neuron subtypes in the mouse forepaw primary somatosensory cortex***
Authors: **Michael Duhain**, McKenzie Yun, Kuan Hong Wang, Manuel Gomez-Ramirez
- 29. *EEG artifact in Deep Brain Stimulation Patients: the Halo Effect***
Authors: **Abigail A. Alpers**, Manuel Gomez-Ramirez, Karlo J. Lizarraga, Angela L. Hewitt
- 30. *Cognitive-motor interactions in neurotypical children and young adults using mobile brain-body imaging (MoBI) show age-related differences in neurophysiology and response inhibition task performance***
Authors: **Paige R. Nicklas**, Edward G. Freedman, John J. Foxe
- 31. *AER-271 is a novel, effective inhibitor of the glymphatic system***
Authors: **Michael Giannetto**, Daniel Gahn-Martinez, Evan Newbold, Ethan Chang, Maiken Nedergaard
- 32. *Depletion of Astrocytic TG2 Upregulates Lipid Handling and Breakdown Mechanisms in Stress Conditions, Enhancing the Ability of Astrocytes to Metabolically Support Neurons***
Authors: **Thomas Delgado**, Jacen Emerson, Peter Girardi, Gail Johnson
- 33. *Using Blood-Oxygen Level Dependent Imaging to Measure Cerebrovascular Reactivity in Patients with Cerebrovascular Disease***
Authors: **Aaron Huynh**, Andy Gonzalez, Madalina Tivarus

Student Groups & Resources

34. *myHub*

Presented by **Elaine Smolock and Amber Rivera**

35. *SACNAS*

Presented by **Julie Nicosia**