

The background of the poster is a photograph of a modern building with a blue-tinted glass facade, viewed from a low angle looking up. The sky is a clear, bright blue with some wispy white clouds. The text is overlaid on this background.

UCONN

**SUMMER
RESEARCH
DAY**

JULY 29, 2022

Academic Rotunda, UConn Health

AGENDA

9:30 – 9:45 am

Welcome (Academic Rotunda Room)

Caroline Dealy, Director, TIP Innovation Fellows Program

Abhijit Banerjee, Associate Vice President, Innovation & Entrepreneurship

Mostafa Analoui, Executive Director, UConn Ventures

Rowena Grainger, Assistant Director for Research and Fellowship Programs,
Enrichment Programs

Rajesh Lalla, Associate Dean for Research, School of Dental Medicine

Caroline McGuire, Executive Director, Enrichment Programs

Jose Cruz, Associate Dean for Graduate Programs, School of Business

9:45 – 10:30 am

Short Talks, Session 1 (Academic Rotunda Room)

Supporting Nutrition Education and Behavior Change with NourishedRx

Kayla O'Connor '22 MS (Health Promotion Sciences, CAHNR)

Host TIP Company: [NourishedRx](#), Stamford TIP

Sponsors: College of Agriculture, Health, and Natural Resources and UConn
Technology Commercialization Services

Clean Water Paradigm in Sustainability

Kashish Manchanda '23 MBA (Business Analytics and Finance, BUS), UConn Hartford

Host TIP Company: [Aqualumos](#), Storrs TIP

Sponsor: UConn Technology Commercialization Services

Frequency Therapeutics

Asirva Alahari '25 (Management and Engineering for Manufacturing, BUS & ENG)

Host TIP Company: [Frequency Therapeutics](#), Farmington TIP

Sponsor: School of Engineering

Protecting Connecticut Forests from Invasive Plant Species

Shashika Himandi Gardeye Lamahe wage '23 MS (Natural Resources, CAHNR)

Host TIP Company: [BirdHabitatBot](#), Storrs TIP

Sponsors: College of Agriculture, Health, and Natural Resources and UConn
Technology Commercialization Services

Remarks

Paul Parker, Director, Technology Incubation Program

Tony Hwang, State Senator, 28th District

Amy Morrin Bello, State Representative, 28th District

10:30 – 11:30 am

Poster Session 1 (Academic Rotunda Hallways, see map on next page)

11:30 am – 12:30 pm

Lunch (provided for student presenters)

12:30 – 1:30 pm **Poster Session 2** (Academic Rotunda Hallways, see map below)

1:30 – 2:15 pm **Short Talks, Session 2** (Academic Rotunda Room)

Data-Driven Communities in Connecticut with FootTraffic Stats

Jacinth Attada '22 MS (Business Analytics and Program Management, BUS), UConn Hartford

Host TIP Company: [FootTraffic Stats](#), Stamford TIP

Sponsor: School of Business

My Experience as a Fellow at Oscillo Biosciences

Emma Graebner '22 (Statistics, CLAS & Music, SFA)

Host TIP Company: [Oscillo Biosciences](#), Farmington TIP

Sponsor: College of Liberal Arts & Sciences

Creating Data Stories Through QBO Using Conversational Analytics

Ben North '23 MBA (Business Analytics and Finance, BUS), UConn Hartford

Host TIP Company: [Unscrambl](#), Stamford TIP

Sponsor: School of Business

Dissemination and Democratization: Citizen Journalism with Social Labs

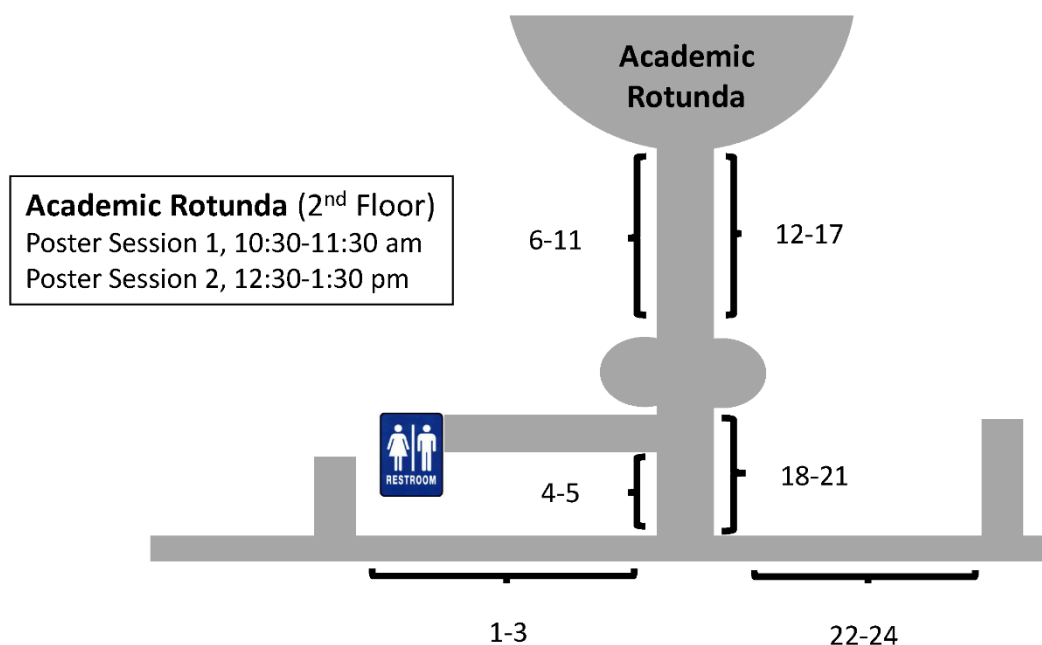
Claire Lee '24 (Ecology and Evolutionary Biology & Political Science, CLAS)

Host TIP Company: [Social Labs](#), Stamford TIP

Sponsor: College of Liberal Arts and Sciences

2:15 – 2:30 pm **Closing** (Academic Rotunda Room)

POSTER SESSION MAP



POSTER SESSION 1

10:30-11:30 am

1. *The Development of a Voluntary Head Restraint System for Attentional Set Shifting Tasks*

Mark Cristino '24 (Biomedical Engineering, ENG)

HRP Mentor: Timothy Spellman, Assistant Professor, Neuroscience

2. *Asymmetric Histone Inheritance and Transposon De-Depression in the Drosophila Male Germline*

Emma Kristine Beard '24 (Molecular and Cell Biology, CLAS)

HRP Mentor: Mayu Inaba-Oguro, Assistant Professor, Cell Biology

3. *Testing the Bactericidal Properties of Modified Surfaces*

Molly Schiffer '23 MS (Microbial Systems Analysis, CLAS)

Sponsor: College of Liberal Arts and Sciences

Chloe Hurme '24 (Pharmaceutical Sciences, PHR)

Sponsor: School of Pharmacy

Host TIP Company: [DeBogy Molecular](#), Farmington TIP

4. *BioSymmetrix*

Krishna Chinmai Dongar '24 (Biomedical Engineering, ENG)

HRP Mentor: Liisa Kuhn, Associate Professor, Biomedical Engineering

5. *Summer at UConn Technology Commercialization Services: Patents & Licensing*

Thomas Koba '23 MS (Biomedical Engineering, ENG)

Luis Raya-Hernandez '24 (Management and Engineering for Manufacturing, BUS & ENG), UConn Waterbury

Host and Sponsor: [UConn Technology Commercialization Services](#)

6. *Maternal Perspectives on Pandemic Parenting*

Denise Brown '23 (Biological Sciences, CLAS)

HRP Mentor: Margaret Briggs-Gowan, Associate Professor, Psychiatry

7. *Effect of Monoiodoacetate Dose on Pain Development in a Rat Osteoarthritis Model*

Aydin Calsetta '25 (Physiology and Neurobiology, CLAS)

HRP Mentor: Lakshmi Nair, Associate Professor, Orthopaedic Surgery, Connecticut Convergence Institute

8. *Studying Cortical Circuitry with GEVI Voltage Imaging*

Abigail Edelstein '24 (Biological Sciences, CLAS)

HRP Mentor: Srdjan Antic, Associate Professor, Neuroscience

9. *High-Throughput Tumor-on-a-Chip Platform for Personalized Colon Cancer Treatment Regimens*

Alicia Predom '22 MS (Applied Genomics, CLAS)

Sponsor: College of Liberal Arts and Sciences

Duran Gonzalez '23 MS (Applied Genomics, CLAS)

Sponsor: UConn Technology Commercialization Services

Host TIP Company: [Encapsulate](#), Farmington TIP

10. *Crucial Role of LSD1 in Cisplatin Induced Kidney Damage*

Elizabeth Carrizzo '23 (Biomedical Engineering, ENG)

HRP Mentor: Yanlin Wang, Professor, Medicine

11. *Expression of Genes in the Colon through Comprehensive RNA-Sequencing*

Lauren Chance '24 (Molecular and Cell Biology & Mathematics/Statistics, CLAS)

HRP Mentor: Marmar Moussa, Assistant Professor, Medicine

12. *Innovation to Take the 'Forever' out of Forever Chemicals*

Jonathan Dias '22 (Biological Sciences, CLAS)

Host TIP Company: [Aqualumos](#), Storrs TIP

Sponsor: College of Liberal Arts and Sciences

13. *Investigating Femoral Phenotype of PRG4 Gene-Trap Mice*

Erica Doyle '24 (Biomedical Engineering, ENG)

HRP Mentor: Tannin Schmidt, Associate Professor, Biomedical Engineering

14. *Role of TEAD1 in TGF- β 1 Induced EMT and Renal Fibrosis*

Lavana Gulati '24 (Molecular and Cell Biology, CLAS)

HRP Mentor: Melanie Tran, Instructor, Medicine

15. *The Development of Antibacterial and Biocidal Surfaces on Urinary Catheter*

Mei Qiong Xue '23 (Molecular and Cell Biology, CLAS)

Host TIP Company: [DeBogy Molecular](#), Farmington TIP

Sponsor: UConn Technology Commercialization Services

16. *Late-Life Depression and Markers of Immunosenescence*

Medha Illindala '25 (Physiology and Neurobiology, CLAS)

HRP Mentor: Breno Diniz, Assistant Professor, Psychiatry and UConn Center on Aging

17. *Automation Software to Minimize Human Errors While Interacting with Complex Computer Graphical User Interfaces in Research Settings*

Anastasiia Drozdova '25 (Computer Science and Engineering, ENG)

HRP Mentor: Manuel Castro-Alamancos, Professor, Neuroscience

18. *Synthesis of Novel Near-Infrared Voltage Sensitive Dyes*

Giuliana Judge '25 (Chemistry, CLAS)

HRP Mentor: Ping Yan, Assistant Professor, Richard D. Berlin Center for Cell Analysis and Modeling

19. *Investigating the Catalytic Properties of Mixed Metal Oxide Ceramics Using UV-Vis Spectroscopy*

Daniyal Athar '24 (Molecular and Cell Biology, CLAS)

Host TIP Company: [Nanoionix](#), Farmington TIP

Sponsor: UConn Technology Commercialization Services

20. *Feasibility Study on Medication Reconciliation App Feedback from Pharmacy Team's Perspective*

Yesenia Contreras '23 (Allied Health Sciences, CAHNR)

HRP Mentor: Thomas Agresta, Professor, Family Medicine and Center for Quantitative Medicine

21. *Changes in Health, Work, and Non-Work Factors During COVID-19 Among Hourly and Salaried Manufacturing Workers*

Delia Lin '24 (Molecular and Cell Biology & Statistics, CLAS)

HRP Mentor: Jennifer Garza, Assistant Professor, Medicine

22. *Market Evaluation of a Novel Postbiotic to Treat Diabetes & Prediabetes in Pets*

Pritesh Kadu '23 MBA (Business Analytics and Finance, BUS), UConn Hartford

Host TIP Company: [Bactana](#), Farmington TIP

Sponsor: UConn Technology Commercialization Services

POSTER SESSION 2

12:30-1:30 pm

1. *Plasma Sprayed Coatings to Improve Engine Efficiency*

Amy Weiss '23 (Chemical Engineering, ENG)

Host TIP Company: [Solution Spray Technologies](#), Storrs TIP

Sponsored by UConn Technology Commercialization Services

2. *Buprenorphine-Assisted Treatment For Opioid Use Disorder: Impact of Psychiatric Disorder Severity on Substance Use Treatment Outcomes*

Jenna Polidoro '23 (Physiology and Neurobiology, CLAS)

HRP Mentor: Carla Rash, Associate Professor, Medicine

3. *Demystifying Data: Making Your Insights Work for You*

Nayara Zainadine '22 (Biomedical Engineering, ENG)

Sponsor: UConn's Louis Stokes Alliance for Minority Participation (LSAMP) Program

Shruti Susarla '25 (Biological Sciences, CLAS), TIP WiMSE Fellow (Women in Math, Science, and Engineering)

Sponsor: UConn TIP and Technology Commercialization Services

Host TIP Company: [Unscrambl](#), Stamford TIP

4. *Quantitative Model of Cellular Iron Regulation*

Jacob Sauerhoefer '23 (Physics, CLAS)

HRP Mentor: Pedro Mendes, Professor, Cell Biology & Director, Center for Cell Analysis and Modeling

5. *Examining RUNX2 Expression during Odontoblasts Differentiation and Repair in Mouse Incisors*

Kaila Lujambio '25 (Allied Health Sciences, CAHNR)

HRP Mentor: Mina Mina, Professor, Pediatric Dentistry & Craniofacial Sciences

6. *Asthma and Long-COVID Engagement that's Fun and Impactful*

Aarush Kolli '25 Pharm.D.

Sponsor: School of Pharmacy

Oliver Cloiseau '24 (Nursing, NUR)

Sponsor: School of Nursing

Host TIP Company: [Foottraffic Stats](#), Stamford TIP

7. *SLO-1 and PCDR-1 Regulate Sleep Neuron RIS Activity in C. elegans*

Juwon Kang '24 (Biological Sciences, CLAS)

HRP Mentor: Zhao-Wen Wang, Professor, Neuroscience

8. *Role of CD13 in Macrophage Fusion*

Fraser McGurk '25 (Molecular and Cell Biology, CLAS)

HRP Mentor: Mallika Ghosh, Assistant Professor, Cell Biology

9. *CRISPR Gene Editing to Test the Function of DNA Mismatch Repair in Cancer-Associated Variants*

Patrick Pagano '25 (Allied Health Sciences, CAHNR)

HRP Mentor: Christopher Heinen, Professor, Medicine

10. *Wave Aerospace Research Fellowship*

Tasbita Ahmed '24 (Chemical Engineering, ENG), TIP WiMSE Fellow (Women in Math, Science, and Engineering)

Host TIP Company: [Wave Aerospace](#), Stamford TIP

Sponsor: UConn First Year Programs and Learning Communities

11. *Localization of Cancer Stem Cells and Iodine Nanoparticle Labeling of Advanced Orthotopic Glioma Mice*

Jessica Ortega '23 (Pathobiology, CAHNR)

HRP Mentor: Henry Smilowitz, Associate Professor, Cell Biology

12. *Parents' Magnification of Children's Negative Emotions: Ties to Children's Depression and Anxiety*

Yamini Pant '23 (Psychological Sciences, CLAS)

HRP Mentor: Carolyn Greene, Assistant Professor, Psychiatry

13. *Evolving Intrinsically Disordered Peptides for Biosensor Development*

Aiden Reilly '24 (Biomedical Engineering, ENG)

HRP Mentor: Yi Wu, Associate Professor, Genetics and Genome Sciences

14. *PatentPlus: 21st Century Patent Searching*

Ryan Mercier '24 (Computer Science, ENG), TIP Innovation House Fellow

Sponsor: UConn First Year Programs and Learning Communities

Varsha Rathore '23 (Computer Science & Engineering, ENG)

Sponsor: School of Engineering

Host TIP Company: [PatentPlus](#), Stamford TIP

15. *The Effects of Acidic Challenge on Bone in Ex Vivo Models*

Sydney Whittaker '25 (Biological Sciences, CLAS)

HRP Mentor: Alix Deymier, Assistant Professor, Biomedical Engineering

16. *Gene Regulation in Borrelia burgdorferi, the Lyme Disease Spirochete*

Om Sinojia '25 (Biological Sciences, CLAS)

HRP Mentor: Melissa Caimano, Associate Professor, Medicine

17. *Handwarmer Heating System for CRISPR-Based Molecular Detection*

Daniel Schreiber '23 (Biomedical Engineering, ENG)

HRP Mentor: Changchun Liu, Associate Professor, Biomedical Engineering

18. *Re-Envisioning Journalism through Digital Verification & Organization*

Siddarth Pai '22 MS (Business Analytics and Program Management, BUS), UConn Hartford

Sponsor: UConn Technology Commercialization Services

Nashwa Siddique '22 (Management Information Systems, BUS)

Sponsor: UConn Technology Commercialization Services

Host TIP Company: [Social Labs](#), Stamford TIP

19. *Examining Event Related Potentials in Response to Affective Stimuli*

Sheela Tavakoli '24 (Individualized: Behavioral Neuroscience, CLAS)

HRP Mentor: Damion Grasso, Associate Professor, Psychiatry

20. *Identifying Downstream Targets of P2X4R after Ischemic Brain Injury*

Kiana Klafter '24 (Physiology and Neurobiology & History, CLAS)

HRP Mentor: Rajkumar Verma, Assistant Professor, Neuroscience

21. *A Remodeling-based Approach for Osteochondral Allograft Integrative Repair*

Arsalan Zaki '25 (Physiology and Neurobiology, CLAS)

HRP Mentor: Caroline Dealy, Associate Professor, Craniofacial Sciences, Cell Biology, Orthopedic Surgery, and Biomedical Engineering

22. *Role of CNN2 in Acute Kidney Injury (AKI)*

Zachary Palanza '23 (Molecular and Cell Biology, CLAS)

HRP Mentor: Dong Zhou, Assistant Professor, Medicine

23. *Reducing Carbon Footprints via NFTS*

Darius Stallone '22 MS (Business Analytics and Program Management, BUS), UConn Stamford

Host TIP Company: MetaCarbon, Stamford TIP

Sponsor: School of Business

24. *Using Computer Vision and Machine Learning to Improve Efficiency of Energy Sector Operations*

Abhiram Gunti '24 (Computer Science, ENG)

Host TIP Company: [NoteworthyAi](#), Stamford TIP

Sponsor: UConn Technology Commercialization Services

ACKNOWLEDGEMENTS

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We thank the University's Interim President, Radenka Maric, for her sustained commitment to developing experiential learning opportunities for our students and to fostering creativity, innovation, and entrepreneurship in education and research.

The Office of Undergraduate Research wishes to thank the sponsors of the Health Research Program:

- Interim Provost Anne D'Alleva, Vice Provost Michael Bradford, Interim Vice Provost Amy Gorin, and the Office of the Provost
- Interim Vice President for Research, Innovation, and Entrepreneurship Pamir Alpay, Associate Vice President Michelle Williams, and the Office of the Vice President for Research
- Dean Bruce Liang and the UConn School of Medicine
- Dean Steven Lepowsky and the UConn School of Dental Medicine
- Associate Vice Provost Jennifer Lease Butts and Enrichment Programs

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- Interim Vice President for Research, Innovation, and Entrepreneurship Pamir Alpay and the Office of the Vice President for Research
- Mostafa Analoui, Executive Director, UConn Ventures, and Paul Parker and Margaret Feeney, Directors, Technology Incubation Program (TIP)
- Dean John Elliott and the School of Business
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- Executive Director David Ouimette and the Office of First Year Programs and Learning Communities

Finally, we thank the student participants for their curiosity, enthusiasm, and commitment to deep engagement with their summer projects.

PRESENTER INDEX

Poster presenters are listed with their poster session number (PS1 for session 1 or PS2 for session 2) followed by their poster number. Short talk presenters are listed with their short talk session (ST1 for session 1 or ST2 for session 2). Please refer to the agenda for the timing of each session.

Ahmed, Tasbita – PS2, 10	Ortega, Jessica – PS2, 11
Alahari, Asirva – ST1	Pagano, Patrick – PS2, 9
Athar, Daniyal – PS1, 19	Pai, Siddarth – PS2, 18
Attada, Jacinth – ST2	Palanza, Zachary – PS2, 22
Beard, Emma Kristine – PS1, 2	Pant, Yamini – PS2, 12
Brown, Denise – PS1, 6	Polidoro, Jenna – PS2, 2
Calsetta, Aydin – PS1, 7	Predom, Alicia – PS1, 9
Carrizzo, Elizabeth – PS1, 10	Rathore, Varsha – PS2, 14
Chance, Lauren – PS1, 11	Raya-Hernandez, Luis – PS1, 5
Cloiseau, Oliver – PS2, 6	Reilly, Aiden – PS2, 13
Contreras, Yesenia – PS1, 20	Sauerhofer, Jacob – PS2, 4
Cristino, Mark – PS1, 1	Schiffer, Molly – PS1, 3
Dias, Jonathan – PS1, 12	Schreiber, Daniel – PS2, 17
Dongar, Krishna Chinmai – PS1, 4	Siddique, Nashwa – PS2, 18
Doyle, Erica – PS1, 13	Sinojia, Om – PS2, 16
Drozdova, Anastasiia – PS1, 17	Stallone, Darius – PS2, 23
Edelstein, Abigail – PS1, 8	Susarla, Shruti – PS2, 3
Gardeye Laahewage, Shashika Himandi – ST1	Tavakoli, Sheela – PS2, 19
Gonzalez, Duran – PS1, 9	Weiss, Amy – PS2, 1
Graebner, Emma – ST2	Whittaker, Sydney – PS2, 15
Gulati, Lavana – PS1, 14	Xue, Mei Qiong – PS1, 15
Gunti, Abhiram – PS2, 24	Zainadine, Nayara – PS2, 3
Hurme, Chloe – PS1, 3	Zaki, Arsalan – PS2, 21
Illindala, Medha – PS1, 16	
Judge, Giuliana – PS1, 18	
Kadu, Pritesh – PS1, 22	
Kang, Juwon – PS2, 7	
Klafter, Kiana – PS2, 20	
Koba, Thomas – PS1, 5	
Kolli, Aarush – PS2, 6	
Lee, Claire – ST2	
Lin, Delia – PS1, 21	
Lujambio, Kaila – PS2, 5	
Manchanda, Kashish – ST1	
McGurk, Fraser – PS2, 8	
Mercier, Ryan – PS2, 14	
North, Ben – ST2	
O'Connor, Kayla – ST1	