

# 2022 Fall Symposium Friday, September 23 9:00AM



### EVENT SCHEDULE



#### WELCOME

Dr. Vin Moscardelli

Director, Office of National Scholarships and Fellowships & Coordinator of the Holster Scholar Program (9:00 a.m.)

PANEL #1: RESEARCH ON CANCER & CELLULAR PROCESSES (9:10 a.m.)

COFFEE BREAK (10:00 a.m.)

PANEL #2: BIOLOGICAL SCIENCES AT UCONN HEALTH:
A HOLSTER PARTNERSHIP
(10:15 a.m.)

COFFEE BREAK (10:55 a.m.)

PANEL #3: EXLORING GROUP IDENTITY IN THE HUMANITIES
AND SOCIAL SCIENCES
(11:10 a.m.)

CLOSING COMMENTS & THANKS

Dr. Jennifer Lease Butts

Associate Vice Provost for Enrichment Programs and

Director, UConn Honors Program

(11:40 a.m.)

## **PROGRAM**

#### Panel #1: Research on Cancer and Cellular Processes

#### RYAN FRIER

Targeting the Actin Cytoskeleton in Cancer Cell Biology

#### LISA LIANG

Combating Diseases via Nanocarrier Targeted Delivery of Therapeutic DNA

#### DARREN LEE

Examining Behavioral Defenses of the Fungus-growing Ant Trachymyrmex septentrionalis Against Metabolites from Pathogenic Trichoderma Fungi

#### JEREMY H. LESSER

Anatomical Characterization of Descending Projections of Lateral Hypothalamic Glutamatergic and GABAergic Neurons

## Panel #2: Biological Research at UConn Health: A Holster Partnership

#### MINGDA SUN

Targeting Senescent Cells to Improve Wound Healing Using a p21-Cre Mouse Model

#### PRANAV SESHADRI

Patterns of Physical Activity in Cancer Patients Receiving Chemotherapy or Immunotherapy Treatment

#### TREVOR RELIGA

Analysis of the Sub-Cellular Location and Behavioral Consequences of C1QL3 Synaptic Protein

## Panel #3: Exploring Group Identity in the Humanities and Social Sciences

#### ANABELLE SHIRLEY BERGSTROM

Examining the Relationship Between Male and Female ROTC Experiences and Career Ambition

#### KAREN LAU

Investigating Asian American History and Its Roots in New England: A Curriculum for High School Students

## **Introducing the 2022 Holster Scholars**



Anabelle Shirley Bergstrom, originally from Wilton, NH, is a political science and philosophy double major in the Special Program in Law. In high school, she was Valedictorian, President of National Honor Society and Vice President of the Class of 2021. She also wrote a mock amicus curiae brief arguing for the inclusion of women into the Selective Service System and presented it through mock argument before the New Hampshire Supreme Court. At UConn, Anabelle is a member of Law Society, Fundraising Chair to the Honors Board, and a Peer Research Ambassador in the Office of Undergraduate Research (OUR). In the future, she plans on pursuing a J.D., and later, a legal career. In her free time, she enjoys crocheting, hiking, and spending time at the beach.

Project: Examining the Relationship Between Male and Female ROTC Experiences and Career Ambition

Mentor: Prof. Virginia Hettinger, Dept. of Political Science





Ryan Frier, from Middlefield, CT, is a Nutmeg Scholar majoring in molecular and cell biology in the Special Program in Medicine. He graduated from Xavier High School as Valedictorian. He was the captain of the Engineering Team, a programmer on the Robotics Team, a member of the Math Team, president of the Math and Science Honor Societies, and an outside hitter on the varsity volleyball team. He was also a National Merit Finalist and Connecticut Scholar. At UConn, he is a member of Honors Across State Borders, the secretary for the Special Program in Medicine, plays piano for Sing for Hope, and is the co-founder and vice president of the Piano Club. In his free time, Ryan enjoys spending time with friends, playing table tennis, running, and mountain biking.

Project: Targeting the Actin Cytoskeleton in Cancer Cell Biology

Mentor: Prof. Kenneth Campellone, Dept. of Molecular & Cell Biology





Karen Lau, from Norwich, CT, is a Day of Pride Scholar majoring in political science and economics with a minor in Asian American studies in the Special Program in Law. Her research interests include ethnic studies, curriculum development, digital humanities, and education policy. She pursues these interests as the Diversity, Equity, and Inclusion Manager for the Undergraduate Student Government and the Secretary of the Human Rights Symposium. Karen is also an inaugural UConn Humanities Institute Undergraduate Research Fellow, a UConn@COP27 Fellow, and a Campaign Fellow for Joe Courtney for Congress. She aspires to participate in Teach for America after graduation with a goal of one day serving the NAACP Legal Defense and Educational Fund as a public interest attorney. In her free time, Karen enjoys curating Spotify playlists, exploring trails, visiting farmers' markets, and shopping for corduroy pants.

Project: Investigating Asian American History and Its Roots in New England: A Curriculum for High School Students

Mentors: Prof. Jason O. Chang, Dept. of History | Prof. Grace Player, Dept. of Curriculum and Instruction





**Darren Lee**, from Farmington, CT, is a STEM Scholar majoring in molecular & cell biology. During his time at Farmington High School, he played the clarinet, was involved in the school's Science Bowl chapter, served as a treasurer for the National Honor Society, and volunteered at the town library and at the Hill-Stead Museum in Farmington. He is fascinated by the interactions between host organisms and their microbial communities and hopes to investigate these interactions during his time at UConn and beyond. Darren is also a UNIV facilitator and plans to get involved at the EEB research greenhouses on campus. In his free time, Darren enjoys being with his family, spending time in the library, and working in his garden.

Project: Examining Behavioral Defenses of the Fungus-growing Ant Trachymyrmex septentrionalis against Metabolites from Pathogenic Trichoderma Fungi

Mentor: Prof. Jonathan Klassen, Dept. of Molecular & Cell Biology





**Jeremy Lesser**, from Manalapan, NJ, is a STEM Scholar majoring in physiology & neurobiology and minoring in Spanish in the Special Program in Medicine. He is fascinated by the brain and the many complex systems that compose it. In high school, he was a member of National Honor Society, Spanish Honor Society, and Junior State of America. On campus he is a member of the Kidney Disease Screening and Awareness Program, UConn Rescue, and UConn Fencing. He became interested in neuroscience in high school and is now excited to learn more about the brain as a member of Dr. Jackson's lab. Jeremy spends much of his free time playing bass guitar, fencing, volunteering as an EMT, or listening to Green Day songs on repeat. He looks forward to becoming a physician and conducting research in the future.

Project: Anatomical Characterization of Descending Projections of Lateral Hypothalamic Glutamatergic and GABAergic Neurons

Mentor: Prof. Alexander Jackson, Dept. of Physiology & Neurobiology





Lisa Liang, from Madison, CT, is a Stamps Scholar and chemistry major interested in studying nucleic acid and drug delivery through nanoparticles. She graduated at the top of her class from Daniel Hand High School, where she founded the Build Bright Beginnings Club to support the local homeless population, tutored middle school students, and led her school's math team as co-captain, among other activities. Her high school experience with materials science research and witnessing of the impact of research on her daily life while visiting a pharmaceutical company's lab ignited her desire to pursue chemistry research. At UConn, she hopes to combine her passion for materials chemistry and biochemistry to improve drug efficiency and delivery. On campus, Lisa is the Vice President of Honors Council and loves volunteering with the Windham Heights Afterschool Tutoring Program. In her free time, she enjoys drawing, running, and hanging out with her family and friends.

Project: Combatting Diseases via Nanocarrier Targeted Delivery of Therapeutic DNA

Mentor: Prof. Jessica Rouge, Dept. of Chemistry





Trevor Religa, from Cromwell, CT is a molecular & cell biology major who hopes to pursue a career in patient care or academic research in the future. He graduated from Xavier High School in Middletown, CT, where he was a member of the Varsity Crew and Rifle teams, the president of the English Honor Society, and the safety officer and outreach director for the FRC and FTC robotics teams. During his summers, he also spent time as a Youth Camp Counselor, Swim Instructor, and Lifeguard. At UConn, he is a member of Ballroom Dance, Project Sunshine, Alzheimer's Association, and the UNIV facilitator program. Trevor has a strong interest in the molecular determinants of behavior and neuroscience research, which was sparked by his work volunteering with a nursing home and teaching children suffering from neuropsychiatric disorders. In his free time, he enjoys reading sci-fi novels, swimming, and playing guitar/ukulele.

Project: Analysis of the Sub-Cellular Location and Behavioral Consequences of C1QL3 Synaptic Protein

Mentor: Prof. David Martinelli, Dept. of Neuroscience (UCHC)





Pranav Seshadri, from Simsbury, CT, is an exercise science major and Stamps Scholar hoping to pursue a career in both research and medicine. He is fascinated by human physiology and performance, and has tailored much of his research at UConn to studying these topics. In high school, he was Vice President & Blood Drive Chair of the National Honor Society, President of the Tri-M Honor Society, and Leader of Simsbury High's Men's Acapella group, the Unaccompanied Minors. He investigated immunotherapy and the HH1 antibody in Han Lab at UConn Health, under Dr. David Han. At UConn, he is studying human performance post injury in a collaboration with the Institute of Sports Medicine and Brain Imaging Research Center under Dr. Laurie Devaney. He is also researching the physiology of sleep-deprived states under the lens of biomedical instrumentation in the Biosignal Processing & Wearable Device Lab under Dr. Ki Chon. Additionally, he is the UConn Conn-Men's Music Director and an avid member of UConn's Barbell Club.

Project: Patterns of Physical Activity in Cancer Patients Receiving Chemotherapy or Immunotherapy Treatment

Mentor: Prof. Upendra Hegde, Dept. of Medicine (UCHC)





Mingda Sun, from Farmington, CT, is a nutritional sciences major in the STEM Scholars program and Special Program in Medicine. In high school, Mingda was president of the Model UN team and founder of the Food and Nutrition Club. She was a student leader for the Just Us Moving Program (JUMP) of the CT Convergence Institute, in which she helped design community outreach programs for increasing nutrition education and food security in underserved communities. In 2020, she was an oral presentation finalist at the 57th CT Junior Science and Humanities symposium with her project, Agent Based Modeling of Biofilm Growth. She also published a paper in the Harvard Educational Review based on her research internship at the Center For Quantitative Medicine at UConn Health. At UConn, Mingda is on the Pan Asian Council eboard, plays badminton, and is involved in various community outreach activities related to medicine and health care. In her free time, she enjoys running, cooking, and spending time with her family, friends, and dog, Simba.

Project: Targeting Senescent Cells to Improve Wound Healing Using a p21-Cre Mouse Model

Mentor: Prof. Ming Xu, UConn Center on Aging and Dept. of Genetics & Genome Sciences



## ABOUT THE PROGRAM



The Holster Scholar Program is a selective enrichment opportunity for curious, first-year Honors students.

The program is supported through the generosity and vision of Robert and Carlotta Holster, who, together, established an endowment fund in 2009. Inspired by Robert Holster's own excitement in discovering new paths of learning as an undergraduate, this program supports a small number of motivated students who wish to pursue independent research, design, or creative projects in the summer following their first year.

Holster Scholars past and present constitute a community of scholars. Because the awards go to students at an early stage of their development, the program has an outsized impact on the students and their development. In the process, Holster becomes an identity that shapes Scholars' experiences throughout their time at UConn, and often beyond.

Learn more about the program at honors.uconn.edu/holster-scholars



## ABOUT ROBERT & CARLOTTA HOLSTER



Robert Holster and Carlotta Detomaso Holster both entered UConn in 1964. Bob was a member of the inaugural cohort admitted to the Honors Program. They are proud Class of 1968 alums: Bob graduated with a B.A. in Economics and Carlotta graduated with a B.S. in Family Studies.

The Honors Program wishes to acknowledge and thank the Holsters for their enduring gift and its lasting impact on all Holster Scholars.

## HOLSTER SCHOLARS THROUGH THE YEARS

























The 2022 Holster Scholars