

# HOLSTER SCHOLAR PROGRAM

*2021 Fall Symposium*  
*Thursday, October 7*  
*6:00PM*

# EVENT SCHEDULE



## WELCOME

Dr. Vin Moscardelli

Director, Office of National Scholarships and Fellowships &  
Coordinator of the Holster Scholar Program

(4:21)

## INTRODUCING THE 2021 SCHOLARS

(7:07)

## PANEL #1: ENGINEERING A BETTER WORLD

(31:35)

## PANEL #2: BIOLOGICAL SCIENCES AT UCONN HEALTH: A NEW PARTNERSHIP

(30:06)

## PANEL #3: RESEARCH ON CANCER & CELLULAR PROCESSES

(19:30)

## PANEL #4: RESEARCH IN THE HUMANITIES & SOCIAL SCIENCES

(22:12)

## CLOSING COMMENTS & THANKS

(2:39)

# PROGRAM

## *Panel #1: Engineering a Better World*

- *Charlotte Chen, "Antibacterial Silk-Based Surfaces for Urinary Catheters" (Mentor: Prof. Kelly Burke, Chemical & Biomedical Engineering)*
- *Ethan Wicko, "Assessing the Feasibility of a Belt Based Continuously Varied Transmission for Bicycles" (Mentor: Prof. David Pierce, Mechanical Engineering)*
- *Lyla White, "Can 3D Printers Create Viable Personalized Therapy in the Treatment of Diabetes?" (Mentor: Prof. Bodhi Chaudhuri, Pharmaceutical Sciences)*

## *Panel #2: Biological Research at UConn Health: A New Partnership*

- *Olivia Ferrigno, "3D Light Sheet Microscopy of Growth Plate Cartilage" (Mentor: Prof. Liisa Kuhn, Biomedical Engineering)*
- *Hari Patchigolla, "Determining the Primary DNA Substrates of SHLD2's OB-fold Domains" (Mentor: Prof. Dmitry Korzhnev, Molecular Biology & Biophysics)*
- *Sanjana Nistala, "The Effect of Degree of Acetylation on Injectable Glycol Chitosan Degradation and Sustained Release" (Mentor: Prof. Lakshmi Nair, Orthopedic Surgery)*

## *Panel #3: Research on Cancer and Cellular Processes*

- *Ananya Aggarwal, "Cisplatin Loaded Nanoparticles for the Intraperitoneal Treatment of Ovarian Cancer" (Mentor: Prof. Xiuling Lu, Pharmaceutical Sciences)*
- *Jackson Ayers, "Identification of Secretion Factors that Restructure Neural Tissue in a Model of Low-Grade Glioma" (Mentor: Prof. Joseph LoTurco, Physiology & Neurobiology)*

## *Panel #4: Research in the Humanities and Social Sciences*

- *Christian Chlebowski, "The Senator and the Citizen: Comparing the Agendas of the United States Senate and Populace" (Mentor: Prof. Thomas Hayes, Political Science)*
- *Rylee Thomas, "The Film Adaptation as an Essay on Feminism in the Victorian Novel" (Mentor: Prof. Eleni Coundouriotis, English)*

## Introducing the 2021 Holster Scholars



**Ananya Aggarwal**, from Glastonbury, CT, is a STEM Scholar majoring in molecular and cell biology in the Special Program in Dental Medicine. She graduated from Glastonbury High School, where she was President of Key Club and Science Olympiad, Captain of Chemistry Olympiad, and involved in Model UN. She is also a National Merit Scholar Finalist, a Women of Innovation Youth Leadership and Innovation Finalist, and a two-time medalist at the Connecticut Science and Engineering Fair. At UConn Ananya is the Fall Trip and HuskyTHON coordinator for HASB, a PATH mentor, a UNIV facilitator, and is involved in the Pre-Dental Society and Community Outreach. Ananya is interested in biochemistry research and hopes to combine her academic interests with her love for patient care by researching methods to improve drug delivery. Ananya is a chronic chai lover and spends her spare time reading and talking with friends.

**Project:** Cisplatin Loaded Nanoparticles for the Intraperitoneal Treatment of Ovarian Cancer

**Mentor:** Prof. Xiuling Lu, Dept. of Pharmaceutical Sciences





**Jackson Ayers**, from Simsbury, CT, is a physiology and neurobiology major who hopes to pursue a career in medicine. In high school, he was involved in the soccer, baseball, and tennis programs, and was the incumbent captain of the latter before COVID-19. He was a member of the National Latin Honor Society, Vice President of the National Business Honor Society, and a class representative of the National Honor Society. He was chair of the American Red Cross Committee at Simsbury High School, and hopes to further his involvement with the organization at UConn. On campus, he is a part of the volunteer committee for Camp Kesem, a member of Honors in STEM, and hopes to participate in club sports after the pandemic. In his free time, Jackson enjoys hanging out with friends, going to the Dairy Bar, and early morning gym sessions.

**Project:** Identification of Secretion Factors that Restructure Neural Tissue in a Model of Low Grade Glioma

**Mentor:** Prof. Joseph LoTurco, Dept. of Physiology & Neurobiology





**Charlotte Chen**, from Weston, CT, is a STEM Scholar majoring in materials science and engineering and biological sciences with minors in chemistry and molecular and cell biology. She is fascinated by the world of biomaterials and their roles in making treatments more accessible and reliable. At Weston High School, she was captain of the Science Olympiad team, Editor-in-Chief for her school newspaper, a violinist in the Symphonic and Company pit orchestras, and a member of the Robotics and Mock Trial teams. At UConn, Charlotte is an outreach coordinator for Camp Kesem, the Associate Digital Editor for *The Daily Campus*, secretary for the Chamber Orchestra, and a mentor for PATH and the Asian/Asian American Mentoring Program. In her free time, she enjoys experimenting with baking, biking around campus, trying to keep her small army of plants and succulents alive, and spending time with her family, cats, and friends.

**Project:** Antibacterial Silk-based Surfaces for Urinary Catheters

**Mentor:** Prof. Kelly Burke, Dept. of Chemical & Biomolecular Engineering





**Christian Chlebowski**, from Somers, CT, is a Nutmeg Scholar majoring in accounting, with an academic and research interest in governmental representation and policy. He graduated from Somers High School, where he was the President of both the Class of 2020 and the National Honor Society; he was also heavily involved in the Spartan Band, as a senior drum major, and Students Supporting Students, as a peer mentor. At UConn, he is excited to guide his peers as an Honors GPS and a Leadership Certificate Series Facilitator. He also serves as the Outreach Committee Chair for TEDxUConn. His interests, which lie at the intersection of business, analytics, and government, were sparked while serving as an election official, in which capacity he assists with election facilitation and verification processes. In his free time, he enjoys reading fiction, writing poetry, hiking, serving in his community, and spending time with his family and friends.

**Project:** The Senator and the Citizen: Comparing the Agendas of the United States Senate and Populace

**Mentor:** Prof. Thomas Hayes, Dept. of Political Science





**Olivia Ferrigno**, from Belle Mead, NJ, is a mechanical engineering major with interests in biomaterials and an emerging interest in environmental studies. At Montgomery High School she was on the board of Operation Smile, graduated in the top 10% of her class, and was a member of the National Honors Society. Through her 13 year long gymnastics career, she found a passion for mechanics as it relates to the human body and is interested in finding ways to optimize recovery treatments. Witnessing her older sister's accomplishments and passion for research has inspired Olivia to get involved and bring her dedication to the field of engineering research. Since coming to UConn, she has joined the Society of Women Engineers (SWE) and the Astronomy Club, and is excited to work with Dr. Liisa Kuhn in her biomedical engineering lab. In her spare time, Olivia enjoys being outside, knitting, and watching movies with friends.

**Project:** 3D Light Sheet Microscopy of Growth Plate Cartilage.

**Mentor:** Prof. Liisa Kuhn, Dept. of Biomedical Engineering (UConn Health)







**Sanjana Nistala**, from Avon, CT, is a biomedical engineering major with a minor in computer science. She became interested in research in high school, after interning at the CT Convergence Institute, where she first learned about hydrogels and their potential applications in pain management for chronic musculoskeletal disorders. At Avon High School, she was an avid member of Model UN and was two-time captain of the Girls' JV Tennis Team. She also volunteered at her local library, where she helped coordinate events for children and families in her community. On campus, Sanjana is the treasurer of the American Medical Women's Association, an active member of UConn's Genetic Engineering Team (iGEM), and a topic specialist for UNSC at UConn Model UN. In the future, she hopes to continue to pursue a PhD, and later, a career in research.

**Project:** The Effect of Degree of Acetylation on Injectable Glycol Chitosan Degradation and Sustained Release

**Mentor:** Prof. Lakshmi Nair, Dept. of Orthopedic Surgery (UConn Health)





**Hari Patchigolla**, from Avon, CT, is a STEM Scholar doing a dual degree in molecular and cell biology and computer science. He graduated from Avon High School where he was the Captain of the Cross Country and Indoor Track teams. He also volunteered as a team captain of his Relay for Life team and at the Cancer Institute in New Britain. His interest in research started when he interned at the Connecticut Convergence Institute and the Department of Molecular Biology and Biophysics at UConn Health. Hari is a RESULTS advocate and at UConn he coordinates different political events through the Political Engagement Program. He helps local students learn English as a second language through the English Language Learners Family Literacy Program.

**Project:** Determining the Primary DNA Substrates of SHLD2's OB-fold Domains

**Mentor:** Prof. Dmitry Korzhnev, Dept. of Molecular Biology and Biophysics (UConn Health)





**Rylee Thomas**, from East Hampton, CT, is double majoring in English and communication with a creative writing concentration. She graduated from East Hampton High School as class salutatorian. She is a U.S. Figure Skating Association Gold Medalist and All-American Athlete. On campus, Rylee is a UNIV facilitator and the Treasurer and Community Service Chair of the UConn Figure Skating Team. She enjoys writing and publishing on the eboard for the Honors Humanities and Arts Collective, and gives back to the community as a team leader for Honors Across State Borders. She writes newsletters for UConn Community Outreach. She hopes one day to work in the publishing industry and write novels. She's interested in learning about how feminism and Victorian literature interact and how film adaptations change the way people experience the classics today. In her free time, she enjoys reading Jane Austen novels and writing fiction and poetry.

**Project:** The Film Adaptation as an Essay on Feminism in the Victorian Novel

**Mentor:** Prof. Eleni Coundouriotis, Dept. of English





**Lyla White** is a STEM Scholar from Newington, CT, majoring in pharmacy studies and minoring in biological sciences. In high school, Lyla founded a debate club and writing center, tutored students in math, and graduated as the salutatorian. After shadowing in medical practices and attending UConn's Migrant Farmworker Clinics in high school, she committed to a biomedical career. Her first research project was a systematic review evaluating the validity of claims about CBD topical products. She is now enamored with the prospect of 3D printing ushering in the era of personalized medicine. Outside the lab, Lyla has been active in the STEM Scholar community and UConn Hillel, and has acquired leadership roles in the Honors in STEM club and the UConn Climbing Team. She also created four videos for the UConn School of Pharmacy series informing the public about COVID-19 vaccines.

**Project:** Can 3D Printers Create Viable Personalized Therapy in the Treatment of Diabetes?

**Mentor:** Prof. Bodhi Chaudhuri, Department of Pharmaceutical Sciences





**Ethan Wicko** is a STEM Scholar pursuing a major in mechanical engineering at UConn. From Milford, CT, he graduated from Notre Dame High School West Haven where he was captain of his high school's math team, band, and tennis team. Additionally, he was the founder and captain of his high school's mountain bike team and ran a charity mountain bike race for Yale-New Haven Health Children's Hospital. At UConn, he is a member of the Formula SAE team, the Cycling team, and the Ski team. Through his college experience, Ethan hopes to further his understanding of the mechanical and physical principles present in various current modes of transportation and technology used in emerging "green" forms of transportation.

**Project:** Assessing the Feasibility of a Belt-Based Continuously Varied Transmission for Bicycles

**Mentor:** Prof. David Pierce, Dept. of Mechanical Engineering



## ABOUT THE PROGRAM



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

Inspired by Robert Holster's own excitement in discovering new paths of learning as a member of the inaugural class of UConn's Honors Program, this program supports a small number of motivated students who pursue independent research, design, or creative projects during 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](https://honors.uconn.edu/holster-scholars)



## ABOUT ROBERT HOLSTER



Robert Holster entered UConn in 1964 as part of the inaugural group admitted to the Honors Program. He graduated in 1968 with a B.A. in economics. Mr. Holster then served in the U.S. Army before completing his M.B.A. at Columbia University's Graduate School of Business, where he was a Bronfman Fellow. He went on to hold leadership positions at several companies, including HMS Holdings, which, through its subsidiaries, provides information management and data processing products and services to hospitals and health care providers, government health service agencies, and companies serving the health care industry.

The gift that supports this program was given jointly with Mrs. Carlotta Holster, a 1968 family studies graduate.



# HOLSTER SCHOLARS THROUGH THE YEARS



2011



2012





2013



2014



2015



2016



2017

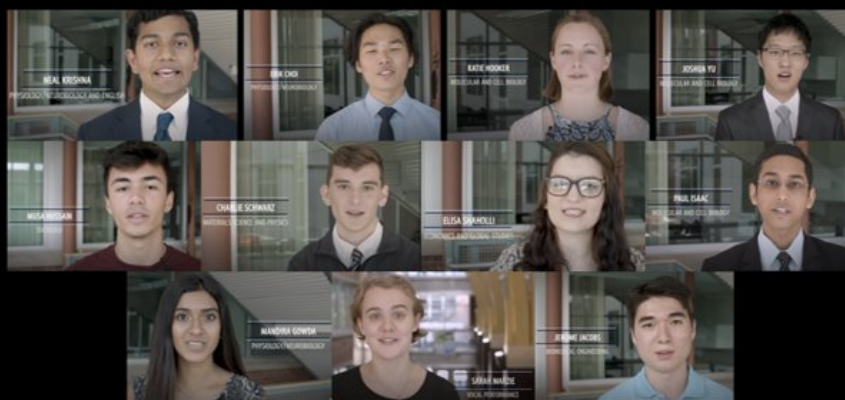


2018





2019



2020

