



MEDALS CEREMONY

HONORS PROGRAM

The Honors Medals Ceremony is the culmination of a student's time in the UConn Honors Program. This annual event began in 2004 as a way to celebrate those students who have completed the rigorous Honors curriculum and are graduating as Honors Scholars or University Scholars. Founded in 1964, the Honors Program offers intellectually gifted and highly motivated undergraduate students the opportunity to obtain the richest possible collegiate experience. Working with every school and college, the Honors Program promotes challenging coursework and encourages intellectual independence through research and creative activities. Students form personal relationships with faculty and staff through Honors classes, regular contact with advisors, and the close supervision that comes with conducting the Honors thesis. Students make life-long friends and enhance their talents by living in Honors residential communities, attending Honors events, and joining Honors student organizations. Honors students also contribute significantly to the greater campus culture of UConn through their academic engagement, leadership, and involvement.

This rite of passage marks the end of our students' undergraduate careers and the beginning of their next stage in life. They have spent their time in Honors knowing they were part of a community: living, learning, and building relationships they will take with them for decades to come. It is important to note that their successes were not accomplished alone. Much of their development depended upon a wider support system. Honors faculty and advisors worked closely with our students to guide their studies and broaden their minds. Parents and family have supported their scholar, offering any assistance required for them to blossom into adults. And the Honors alumni and donors extended helping hands to move our students forward, giving of their time, their wisdom, and their own success to aid our students' journeys. Although these extraordinary and challenging times have prevented us from gathering at the close of the 2020-2021 academic year; the joy, pride, and gratitude we celebrate as an Honors community remains a constant as we pay tribute to our graduating scholars.

Honors Scholars

These students have completed a rigorous academic program that culminated in the production of an Honors thesis or creative project. The requirements for graduating as an Honors Scholar include a minimum of fifteen Honors credits including twelve in the major (or approved related areas) and earning a total grade point average of at least 3.4. Following is a list of graduating Honors Scholars, their majors, their thesis titles, and the faculty advisors for their theses.

BENJAMIN HENRY ADAMS

Accounting

Assessing Leadership in Business -Accounting: A Critical Investigation of Elon Musk

Advised by: Nell D'Auria

OLIVIA MARIE ADAMS

Psychological Sciences

The Effect of Social Comparison and the Fear of Missing Out (FOMO) on Anxiety Symptoms in Late Adolescents

Advised by: Kimberli Treadwell

ABHINNA ADHIKARI

Computer Science & Engineering

Certificate Transparency Misbehaving Monitor Detection

Advised by: Amir Herzberg

AYUSHI AGRAWAL

Biomedical Engineering

Features of Cutting Edge Mammography Machines

Advised by: Krystyna Gielo-Perczak

POOJA AGRAWAL

Mathematics/Actuarial Science

Monte Carlo Simulation of Exotic Options

Advised by: Edward Perry

EMAN ZEHRA AHMED

Physiology & Neurobiology

Analysis of Timing of Transcriptional Readthrough Events in Mitosis

Advised by: Leighton Core

OLASUBOMI AYOMINI AJAYI

Allied Health Sciences

The Impact of COVID-19 on Hartford Food Insecurity

Advised by: Kristen Cooksey

STEPHANIE IFEOMA AKOSA

Physiology & Neurobiology

Development of Physiological Markers for Motivational Dysfunctions through the use of Tetrabenazine and Electroencephalograms in a Female Rat Model

Advised by: John Salamone

FIZZA ALAM

Political Science

Did Anti-Trump Protests Matter in the 2018 Midterm Election?: An Analysis of Whether Post-Inauguration Protests Affected the 2018 House Electoral Outcome

Advised by: Jeffrey Ladewig

BERK ATA ALPAY

Computer Science

A Probabilistic Model of RNA Constraints on Viral Evolution

Advised by: Jinbo Bi

ASHWIN REDDY AMBATI

Finance

Assessing Leadership in Business - Finance: A Critical Investigation of Bill Gates

Advised by: Nell D'Auria

JACEY ANDERSON

Psychological Sciences

Language Abilities as a Function of Lateralization of Language-specific Brain Networks

Advised by: Inge-Marie Eigsti

SARAH MEGANN ANDERSON

Biological Sciences

*The Effect of the Battle Ratio on Combat Behavior in *Nasutitermes corniger**

Advised by: Elizabeth Jockusch

DANIELLA ALEXANDRA ANGULO

English

Latinas' Experiences of Health Concerns: Literary Explorations and their Real-World Reflections

Advised by: Margaret Breen

DANIELLA ALEXANDRA ANGULO

Human Rights

Latinas' Experiences of Health Concerns: Literary Explorations and their Real-World Reflections

Advised by: Sara Silverstein

SOPHIA ELENI ARRUDA

Biological Sciences

Mechanisms Underlying Helminth-associated Alterations of the Gut Microbiota in Threespine Stickleback

Advised by: Daniel Bolnick

GREGORY R. AUSTIN

Biomedical Engineering

Neural Network Development for White Blood Cell Identification

Advised by: Guoan Zheng

EDUARDO ANTONIO BADILLO COLBERG

Molecular & Cell Biology

*Reeling In New Antibiotics: Synthesis and Antimicrobial Susceptibility Testing of Zinc-Binding Clavanins from *Styela clava* (Sea Squirt)*

Advised by: Alfredo Angeles-Boza

STEPHEN ANDREW BAKER

Anthropology

An Archaeological Study of the Morphology of Charred Bread and a Preliminary Identification of Bread Remains at Tell Leilan

Advised by: Alexia Smith

AMBER HOLLY BARDSLEY

Physiology & Neurobiology

Effects of a Play-Based Intervention on Locomotor Skills and Strength Performance of Children with Autism Spectrum Disorder

Advised by: Sudha Srinivasan

COLIN THOMAS BARLOW

Management Information Systems

Statistical Analysis of Current Trends in the National Basketball Association

Advised by: Craig Calvert

JOHN BAUMGARTEL

Mechanical Engineering

Engineering the Ideal Photograph

Advised by: Ryan Cooper

GAGANJOT SINGH BEDI

Molecular & Cell Biology

Assessing the Efficacy of Jellow: A communicative aid for children with ASD

Advised by: Sudha Srinivasan

LILY MARGARET BELLO

Animal Science

Effects of Probiotic Supplementation on the Growth and Health of Pre-weaned Dairy Calves

Advised by: Amy Safran

ANNIKA MERCEDES BENEDETTI

Natural Resources

Role of crowding in ranavirus epidemics in wood frog tadpoles

Advised by: Tracy Rittenhouse

JOAO BENITES

Business Data Analytics

MAYA ELEANOR BENSON

French

Une Exploration du Style et du Message dans une sélection d'œuvres d'Annie Ernaux

Advised by: Elisabeth Buzay

JACK HARRISON BERGANTINO

Economics

Darkness Falls Upon America's Backyard: An Evaluation of Central Appalachia's Past Economic Woes and a Blueprint for the Region's Future Economic Development

Advised by: Stephen Ross

SAMUEL PIERCE BERKUN**Finance**

A History of Speculative Investing and the Rise of Special-Purpose Acquisition Companies (SPACs)

Advised by: Paul Gilson

MATTHIEU JOHN BERNIER**Mechanical Engineering**

Possible Improvements for Underwater Sound Speed Measurement Devices

Advised by: Georgios Matheou

ALEXANDRA BETTINA BETTENCOURT**Animal Science**

The Effects of Poor Maternal Nutrition During Gestation on Colostrum Quality and Immunoglobulin G Concentrations in Sheep

Advised by: Sarah Reed

SEJAL BHARGAVA**Finance**

Assessing Leadership in Business - Finance : A Critical Investigation of Mark Zuckerberg

Advised by: Nell D'Auria

AKRITI BHATTARAI**Molecular & Cell Biology**

Identifying and Classifying Potential Disease Resistance Genes in White Pine Species

Advised by: Jill Wegrzyn

HELEN LIU BIAN**Molecular & Cell Biology**

Functional Classification of Known and Novel Single Nucleotide Polymorphisms Associated with Chronic Lymphocytic Leukemia Predisposition

Advised by: Leighton Core

ELISABETH ANNE BIENVENUE**History**

La Vie en Chant: The Role of Songbooks in Franco-American Survivance

Advised by: Nancy Shoemaker

AVERY BAER BIKERMAN**Applied & Resource Economics****SAMANTHA ROSE BIRD****Ecology & Evolutionary Biology**

*Nesting Habits of *Eurycea bislineata**

Advised by: Elizabeth Jockusch

GAVIN ALDER BIRDSALL**Physiology & Neurobiology**

Using Single-cell RNA-seq Analysis to Assess Heterogeneity in a Model of Ependymoma Brain Tumors

Advised by: Joseph LoTurco

EMILY PAIGE BLACKBURN**Molecular & Cell Biology**

A Review of Ciliopathies Directly Related to Pancreatic Cells and the Implications for Diabetes

Advised by: Yi Wu

HEATHER HOFFMAN BOUCHER**Chemical Engineering**

Development of Sustainable Agriculture Biotechnology: Calculating Protist Velocity Distributions in Model Soil Transport Systems

Advised by: Leslie Shor

MEGAN ANN BRAAT**Biological Sciences**

The Role of Parasitic In Stickleback Stoichiometry

Advised by: Daniel Bolnick

AMANDA R. BRAUN**Nursing**

Premenstrual Dysphoric Disorder in University Students

Advised by: Cheryl Beck

LYNNA BRAY**History**

The American Pearl within the Spanish Crown

Advised by: Ricardo Salazar-Rey

MALACHI XAVIER BRIDGES**Africana Studies**

Blacks and the American Dream Study (BATADs): Why Blacks are Socially Immobile?

Advised by: Fiona Vernal

JULIE M. BRISSON**Human Development & Family Sciences**

Adverse Childhood Experiences and Allostatic Load Across the Lifespan: A Systematic Review and Meta-analysis

Advised by: Blair Johnson

HANNAH BALDWIN BRODERICK**Finance Assessing**

Leadership in Business - Finance: A Critical Investigation of Mary Dillon

Advised by: Nell D'Auria

TARIF WILLARD BROWN**Anthropology**

Cambodia's Joint International Tribunal Extraordinary Chambers in the Courts of Cambodia (ECCC)

Advised by: Richard Wilson

TARIF WILLARD BROWN**History**

The Socio-political Significance of Former Chinese Chairman Jiang Zimen's Three Represents Policy

Advised by: Peter Zarrow

AIDAN JACOB BRUECKNER**Digital Media & Design**

Scrimshaw

Advised by: Joseph Scheinfeldt

EMILY ANNE BURKE**Individualized: Youth Development & Wellness**

Differences Between Policy Language and Implementation of School Wellness Policies: The WellSAT-I

Advised by: Marlene Schwartz

EMMA PAIGE BURLEIGH**Physiology & Neurobiology**

Optimization of Behavioral Assays Used to Analyze Anxiety Behavior in a Restraint Stress Paradigm

Advised by: Alexander Jackson

ANDRE MING CAI**Computer Science & Engineering**

Alternative Statistical Approaches For Natural Language Processing

Advised by: Joseph Johnson

DANIELLE ELIZABETH CANFIELD**Physiology & Neurobiology**

Effects of Tetrabenazine on Work Output in Rats Responding on a Novel Progressive Ratio Task: Behavioral, Pharmacological, and Electrophysiological Studies

Advised by: John Salamone

ANTHONY CONSTANTINE CAPASSO**Mathematics**

Using Recursive Divide and Conquer Algorithms for Asymptotically Fast Multiplication

Advised by: Jeremy Teitelbaum

ELIZABETH CHAMIEC-CASE**Engineering Physics**

Adaptation and Design of a Passive Underwater Environmental Monitoring Device

Advised by: Shengli Zhou

MANSI H. CHAPATWALA**Nutritional Sciences**

Effect of Intake of Choline from Eggs vs. Choline Bitartrate Supplement on Blood Pressure, Glucose Levels, Total Cholesterol, HDL and LDL, and Waist Circumference on a Metabolic Syndrome Population

Advised by: Maria-Luz Fernandez

RAABIAH CHAUDHRY**Biological Sciences**

Evaluating Quality Control Methods for Genomic Testing and Analyzation of DNA/RNA

Advised by: Angela Starkweather

NIDHI CHAWLA**Physiology & Neurobiology**

Intersectionality, Access, and Women's Health: Engaging and Enacting a Feminist Model of Health Care

Advised by: Xinnian Chen

NIDHI CHAWLA**Women's Gender & Sexuality Studies**

Intersectionality, Access, and Women's Health: Engaging and Enacting a Feminist Model of Health Care

Advised by: Xinnian Chen

SARAH WENSHAUN CHEN**Physiology & Neurobiology**

Perceived Control as a Moderator between Benefit-Finding and Physiological Measures of Stress in Cancer Survivors

Advised by: Crystal Park

AJITHA CHIVUKULA**Biomedical Engineering**

Galvanic Skin Response as a Significant Variable during Quantitative Stress Measurement of Patients Under Compression of a Mammography System

Advised by: Krystyna Gielo-Perczak

NATHAN CHOI**Computer Science**

A Deep Learning Model for Predicting COVID-19 Transmission in Connecticut

Advised by: Caiwen Ding

ANNA MARIA CIRIELLO**Psychological Sciences**

Prevalence of Sleep Spindles and Delta Waves across Brain Structures in Rodent Models

Advised by: James Chrobak

KATRINA CIRILLI**Biomedical Engineering**

Analysis of Procedural Techniques Used By Technicians to Minimize Patient Discomfort During Mammogram Screenings

Advised by: Krystyna Gielo-Perczak

KIERAN JAMES CLARKE**Computer Science & Engineering**

Introductory Analysis of Quantum Algorithms

Advised by: Walter Krawec

SANDRO D. CLOISEAU**Biological Sciences**

Evaluating The Effect of Glyphosate on Host Survival and Microbiome

Advised by: Joerg Graf

CALVIN COLBY**Mechanical Engineering**

Implementation and Analysis of the Coherent Structure Dynamics Model

Advised by: Alexei Poludnenko

TYLER REID COLEMAN**Mathematics/Statistics**

Probability in Poker: Utilizing Mathematics to Improve Poker Strategy

Advised by: Jeana Vatamanelu

AMANDA CONNELLY**Economics**

Price Transparency in Healthcare

Advised by: Mikhael Shor

LIAM CONNELLY**Biomedical Engineering**

Use of Ptychography in Digital Pathology

Advised by: Guoan Zheng

KEVIN MARTIN COX JR.**English**

Ephemerality in the Poetry of Larry Levis

Advised by: Yohei Igarashi

JILLIAN LINDSAY CRAWFORD**Political Science**

I Call It Madman Theory, Bob: A Comprehensive Analysis of the Foreign Policy Strategies of Richard Nixon and Donald Trump

Advised by: Stephen Dyson

EVE CULLERTON**Natural Resources**

Activity patterns of Connecticut wildlife across a gradient of urban development

Advised by: Tracy Rittenhouse

MARI ELIZABETH CULLERTON**Natural Resources**

Field-based Disturbance Ecology, Remote Sensing, and Geospatial Analysis: An Interdisciplinary Approach to the Evaluation of the Role of Secondary Mortality Agents in Forest Disturbances

Advised by: Robert Fahey

ETHAN THOMAS CUMMISKEY**Civil Engineering**

Meta-Network Analysis of Complex Construction Systems: Improving Project Efficiency Using Novel Computer-Based Analytic Methodology

Advised by: Jin Zhu

CELYA DALILA DAHMANI**Physiology & Neurobiology**

Probing Behavioral and Proteomic Effects of Ketogenic-like Treatment in a Drosophila Model of Glial Tauopathy

Advised by: Geoffrey R. Tanner

JAMES MONTGOMERY D'AMICO**Accounting**

Corporate Social Responsibility and Financial Restatements

Advised by: Stephen Brown

ROBERT ASHELY DAMPIER II**Mathematics-Actuarial-Finance**

UConn Baseball Schedule Optimizing Model

Advised by: James Trimble

DHRUV JAGDISH DANG**Molecular & Cell Biology**

Assessing the Association Between Language-specific Acculturation Characteristics and BMI in Hispanic-American Children

Advised by: Sharon Smith

SYDNEY MARIE DARLING**Physiology & Neurobiology**

The Effect of Anodal tDCS Over the Left Prefrontal Cortex on Cognitive Control

Advised by: Eiling Yee

LILY MARIE DEBLASIO**Political Science**

U.S. Disengagement from International Legal Obligations on Torture: Use of Prolonged Solitary Confinement Explained by Security Sovereignty and American Exceptionalism; Gendering the Genderless: A Critical Reading of the Feminization of Artificial Intelligence

Advised by: Matthew Singer

FAY DECKER**Philosophy**

On Objectivity in Aesthetics

Advised by: Marcus Rossberg

JAKE EDWARD DEFRANCESCO**Individualized: Neuroscience**

Optimizing Gestational Nutrition and Its Effects on the Developing Embryonic Nervous System- a Systematic Review

Advised by: Roslyn Fitch

ERIN ELISABETH DENNEHY**Individualized: Law & Society**

Public Perception of the Legitimacy of the Supreme Court: The Impact of Improper Behavior

Advised by: Virginia Hettinger

ERIN ELISABETH DENNEHY**Political Science**

Public Perception of the Legitimacy of the Supreme Court: The Impact of Improper Behavior

Advised by: Virginia Hettinger

FRANCESCA ANN DEPALMA**Elementary Education**

Female Representation in Children's Literature

Advised by: Catherine Little

SAMANTHA NICOLE DEPALMA**Biological Sciences**

The Impact of Translation Initiation Inhibitors on Cell Division and Development of the Early Zebrafish Embryo

Advised by: Simon White

JULIA TRASK DESIATO**Pathobiology**

Evolution and spread of rabies virus in Connecticut and its neighboring states

Advised by: Dong-Hun Lee

MUKUND VISHWA SAI DESIBHATLA**Physiology & Neurobiology**

The Evolution of Novel DA Transport Inhibitors and their Effects on Effort-Related Motivation: A Review

Advised by: John Salamone

MUKUND VISHWA SAI DESIBHATLA**Spanish**

Identificando determinantes sociales de la salud en la comunidad de Granada, España (Identifying social determinants of health in the community of Granada, Spain)

Advised by: Rosa Chinchilla

LILY LYNN DESMOND**English**

Penning Republics: How Voltaire's Texts Anticipate Revolutionary and Contemporary France

Advised by: Rachael Lynch

HANNAH DESROCHERS**Natural Resources**

Exploring the Effects of Habitat Fragmentation and Plastic Pollution on Terrestrial Bird Species: A Literature Review

Advised by: Isaac Ortega

SEAN PETER DOOLITTLE**Civil Engineering**

GIS Evaluation of Changes in Transportation and Land Use of a Connecticut City

Advised by: Norman Garrick

DEVON DUGENTAS**Computer Science**

Statistical Arbitrage in Cryptocurrency Markets

Advised by: Edward Perry

DEVON DUGENTAS**Mathematics/Statistics**

Statistical Arbitrage in Cryptocurrency Markets

Advised by: Edward Perry

AKIRA MACGREGOR DUNHAM**Civil Engineering**

Is the Fairfield Rail Line a Feasible and Sustainable Alternative to Current Rail Service in Fairfield and New Haven County?

Advised by: Norman Garrick

BRIANNA LEIGH DYER**Individualized: Global Studies**

Ethnic Cleansing within International Criminal Law

Advised by: Richard Wilson

KALEY EMMERICH**Finance**

Modern Technology and Communication Platforms Influence on the Stock Market

Advised by: Paul Gilson

HANNA ELIZABETH ENGLANDER**Physiology & Neurobiology**

Investigating the Effect of the Probiotic Escherichia coli Nissle on Bacterial Persister Survival

Advised by: Wing Ki Mok

ALEXANDER WILLIAM ERCOLANI**Physics**

Applications of Neural Networks in Particle Physics Research

Advised by: Richard Jones

VERONICA ESKANDER**Physiology & Neurobiology**

The Role of KCNQ3 Channels in Neurogenesis

Advised by: Anastasios Tzingounis

FLORAINE EMILY EVARDO**Individualized: Human Health**

The Right to Health and The Philippine Drug War

Advised by: Cesar Abadia-Barrero

KATYLAND MARIE FACAS**Chemical Engineering**

Household Income and Air Pollution at Public Schools in the United States

Advised by: Kristina Wagstrom

DANIEL FAIRCHILD**Structural Biology & Biophysics**

Design and Synthesis of a Tethered Bichromophoric Voltage Sensitive Dye

Advised by: Ping Yan

DANIEL FAIRCHILD**Molecular & Cell Biology**

Design and Synthesis of a Tethered Bichromophoric Voltage Sensitive Dye

Advised by: Ping Yan

ELIZABETH FARRINGTON**Health Care Management**

The Impact of the Covid-19 Pandemic on Telemedicine: Patient Satisfaction on Access and Quality of Care

Advised by: William Pace

YULIYA FARYNA**Individualized: Global Health**

Risk Factors for WIC Non-participation by Parents of Eligible Children

Advised by: Elizabeth Kline

ISAAC VINCENT FAUSTINO**Molecular & Cell Biology**

Automated Cell Counting Reveals Morphological and Topological Features of iPSC-Derived Neural Crest Cells with X-monosomy

Advised by: Stefan Pinter

CASSIDY NICOLE FAWCETT**Political Science**

Theorized Changed to the Westphalian World Order in the Modern International Arena / Impacts of Institutional Design on Judicial Corruption in Belize and Costa Rica

Advised by: Matthew Singer

JUSTIN LEMAR FELICIANO**Physiology & Neurobiology**

CBD and the Ketogenic Diet's Effect on CTE in the Drosophila Fly

Advised by: Geoffrey Tanner

PETER THOMAS FENTEANY**Mathematics**

Exploring the Riemann Hypothesis through Computer Science and Math

Advised by: Keith Conrad

SHAHARIA FERDUS**Molecular & Cell Biology**

Effects of Bacterial Lipid Exposure on Cholesterol Metabolism and Liver Inflammation in HepG2 Cells

Advised by: Christopher Blesso

KELLY T. FINN**Finance**

Assessing Leadership in Business - Finance: A Critical Investigation of Jamie Dimon

Advised by: Nell D'Auria

DANIEL BENJAMIN FISCHLER**Mathematics/Actuarial Science**

Climate Change Preparedness in the Insurance Sector

Advised by: Daniel Watt

BENJAMIN JACOB FLAX**Chemical Engineering**

Evaluation of Multi-Material Homemade Masks for Improved Performance

Advised by: Jeffrey McCutcheon

BRENDAN PATRICK FLYNN**Finance**

Assessing Leadership in Business - Finance: A Critical Investigation of Mark Parker

Advised by: Nell D'Auria

MICHAELA GARYN FLYNN**Economics**

Universal Basic Income and Community-Level Economic Resilience: A Case Study of Appalachia

Advised by: Nishith Prakash

ANN FOLEY**Diagnostic Genetic Sciences**

Cataloging Gene and Single Nucleotide Polymorphism Associations Implicated in Familial Predisposition to Multiple Myeloma

Advised by: Denise Anamani

SIMONE ELAINE FOURNIER**Individualized: Healthcare & Aging**

Factors in End-of-Life Planning Among Connecticut Older Adults

Advised by: Edna Brown

MACKENZIE ANN FOX**Digital Media & Design**

Through a Glass - Exploring Mental Illness Through Digital Storytelling

Advised by: Stephen Slota

MICHAEL DAVITT FOX**History**

A Strange Thing for the Foot to Guide the Head: Freedom of Speech in Elizabethan Parliaments

Advised by: Meredith Rusoff

MICHAEL ANTHONY FRANCOMANO**History**

The United States' Influence on the Legality of Nuclear Weapons

Advised by: Alexis Dudden

EMILY MAY FRANKLIN**Mechanical Engineering**

An Analysis of the Effectiveness of Floating Solar Panels

Advised by: Jason Lee

MICHELLE FRANKLIN**Nursing**

Posttraumatic Growth in Eating Disorders: A Mixed Methods Study

Advised by: Carrie Eaton

SARAH ANNE FRANKLIN**Doctor of Pharmacy**

Pharmacovigilance Study of Reference and Biosimilar Biologic Agents Used in Patients with Cancer

Advised by: Lisa Holle

MALEENA ANN FRAZIER**Structural Biology & Biophysics**

Current and Future Approaches to AMPA Receptor Structural Studies and Potential as a Drug Target

Advised by: James Cole

ALEXANDRA FRENZEL**Marine Sciences**

*Molecular markers of climate adaptation of *Thysanoessa longicaudata* (*Euphausiacea*) in the Arctic*

Advised by: Ann Bucklin

DYLAN PATRICK GAFFNEY**Political Science**

Graduate Path - Political Science Fiction and Political Theory

Advised by: Matthew Singer

JENIFER VIVIANA GAITAN**History**

Salir Adelante: Exploring the Systems of Support of First-Generation Latinx College Students in Their Pursuit of Higher Education

Advised by: Ariel Lambe

MELINDA ROSE GALLERY**Physiology & Neurobiology**

*Changes in Seizure-like Activity (SLA) Following a Traumatic Brain Injury in Different Bang Sensitive Strains of *Drosophila melanogaster* on the Ketogenic Diet*

Advised by: Geoffrey Tanner

JENNA LEIGH GANNON**Allied Health Sciences**

*Effect of Hyperglycemia and Recurrent Hypoglycemia Exposure on Glycolytic Enzyme Expression under Acute Hypoglycemia in *Rattus norvegicus* Cortex*

Advised by: Jeanne McCaffery

MADDISON ELAINE GATES**Communication**

What Will The 123rd Congress Look Like?: The Gender Gap in Political Ambition in College Students

Advised by: Sara Stifano

CHRISTOPHER ALLAN GEIGER**Computer Science & Engineering**

Resist: Reconstruction of Irises from Templates

Advised by: Benjamin Fuller

GABRIELLE KWANG-JIIN GER**Psychological Sciences**

Music Performance Anxiety and the Effects of Early Performance Experiences

Advised by: Blair Johnson

ASHLEY MARIE GILLETTE**Mechanical Engineering**

Impulsive Loading Analysis of the Expulsion of Small Diameter Devices from Torpedo Tube Cartridges

Advised by: Tianfeng Lu

WILLIAM THOMAS GORMAN**Physiology & Neurobiology**

Comparison of Response Speed in Visual and Auditory Cortex

Advised by: Maksim Volgushev

JORDANA MERLOT FLEMING**GRAVELEY****Ecology & Evolutionary Biology**

*Seasonal Plumage Condition Variation and the Thermal Value of the Feather Coats of House Sparrows (*Passer domesticus*)*

Advised by: Margaret Rubega

GRACE EMMA GREENE**Chemistry**

Method for the Targeted and Untargeted Analysis of Oyster Tissue for Per- and Polyfluoroalkyl Compounds (PFASs) by UHPLC- QTOF Analysis

Advised by: Anthony Provas

LISA COURTNEY GRIECO**Mathematics-Actuarial-Finance**

Mortality Improvement and Socioeconomic Factors

Advised by: James Trimble

SAMANTHA GRUBB**Speech, Language & Hearing Sciences**

jsTRACE: A New Implementation of Speech Perception and Word Recognition

Advised by: James Magnuson

VANESA GUADALUPE**Molecular & Cell Biology**

The Relationship between Sleep Adequacy and BMI among Minority Adolescents and Young Adults

Advised by: Sharon Smith

MARIA EMILIA GUERRERO**Biological Sciences**

Physical Inactivity-induced Endothelial Dysfunction: The Role of Toll-like Receptor 4

Advised by: Oh Sung Kwon

ABHISHEK KUMAR GUPTA**Biological Sciences**

The Genetic Influence on Subjective Well-Being

Advised by: Theodore Rasmussen

ABHISHEK KUMAR GUPTA**Sociology**

The Roots of Denial: How threats to conservative white male social identity proliferate the denial countermovements seen in response to climate change and the COVID-19 pandemic.

Advised by: Phoebe Godfrey

SAMHITA GURRALA**Nutritional Sciences**

The Prevalence of Tooth Loss and Chewing Problems and their Association with Dietary Quality and Health Status Among Food Pantry Users

Advised by: Ock K. Chun

ELENA HAARER**Molecular & Cell Biology**

Characterizing the Impact of the Arp2/3 Complex on Genomic Integrity and Cellular Senescence

Advised by: Kenneth Campellone

LIAM ADEN SNYDER HAMILTON

Economics

Income Inequality in Connecticut

Advised by: Steven Lanza

GIBSON LEE HARNETT

Marketing

Assessing Leadership in Business – Marketing: A Critical Investigation of Mark Cuban

Advised by: Nell D’Auria

SANA HAROON

Physiology & Neurobiology

Examining the Relationship between Emotion Regulation and Sleep in Cancer Survivors

Advised by: Geoffrey Tanner

BAILEY MAXWELL WILLOUGHBY

HARRIS

Geographic Information Science

JAMES HE

Molecular & Cell Biology

Identifying the Cell Composition and Clonal Diversity of Supratentorial Ependymoma Using Single-Cell RNA-Sequencing

Advised by: Joseph Loturco

CAROLINE LEIGH HEBERT

Speech, Language & Hearing Sciences

Effects of Language Experience on Spontaneous Counting as an Augmentative Tool for Mapping

Advised by: Marie Coppola

GRACE ELIZABETH HEERSPING

Allied Health Sciences

Delay of Preventive Health Care by of Mothers of Young Children in the United States During the COVID-19 Pandemic

Advised by: Molly Waring

GRACE ANNE DA FONSECA PINTO

HERRICK

Individualized: Global Health

The Critical Need for Early Childhood Development Programs in Uganda

Advised by: Rhiannon Smith

LAUREN ALYSSA HIPPLEWITZ

Political Science

Punishment vs. Rehabilitation:

A Discourse on American Prison Reform & Comparative Analysis to Swedish Incarceration

Advised by: Kristin Kelly

BRENDAN PATRICK HOGAN

Philosophy

Growing Hate: The Vice, Coded Language, and Political Factors Influencing the White Nationalist Movement in the United States Since 2007

Advised by: Heather Battaly

BRENDAN PATRICK HOGAN

Political Science

Growing Hate: The Vice, Coded Language, and Political Factors Influencing the White Nationalist Movement in the United States Since 2007

Advised by: Michael Morrell

JARON ALEXANDER HOLMES

Physiology & Neurobiology

Donor-Held Expectations in Willed-Body Donation Programs

Advised by: John Redden

MARISOL HOOKS

Biological Sciences

The Lure of Monoclonal Antibodies in Cancer Treatment

Advised by: Yaowu Yuan

JULIA ROSE HORAN

Biological Sciences

Chemokinesis of Cellular Slime Mold Dictyostelium Discoideum

Advised by: David Knecht

JAMES EDWARD LEE HORMANN

Mechanical Engineering

Computational Validation of Several Radiation Heat Transfer Models

Advised by: Wilson Chiu

ALEXANDRA MARIE HOUDESHHELL

English

Imperium: A YA Novel in Progress

Advised by: Ellen Litman

SAM SUO HUANG

Computer Science

Internet of Things and Network Security: Concerns, Analysis, and Mitigation

Advised by: Jonathan Moore

SAM SUO HUANG

Management Information Systems

Internet of Things and Network Security: Concerns, Analysis, and Mitigation

Advised by: Jonathan Moore

AMELIA CHIANG HURST

Anthropology

Linking Human Activities to Coastal Water Quality in Southern New England: Past and Present

Advised by: Craig Tobias

AMELIA CHIANG HURST

Marine Sciences

Linking Human Activities to Coastal Water Quality in Southern New England: Past and Present

Advised by: Craig Tobias

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SARAH ELIZABETH SMOLINSKI**Pathobiology**

Phylogenetic Reconstruction of Avian Influenza H7 Poultry Outbreaks in the United States

Advised by: Dong-Hun Lee

KEVIN SNYDER**Mechanical Engineering**

Infrared Thermography Methodology for Modeling Heat Flux in Effusion Plates

Advised by: Baki Cetegen

NOAH JACOB SOBEL-PRESSMAN**Management**

Analyzing the Pathway for UConn Startups and Talent to Local Industry Hotspots

Advised by: David Noble

ANDRE ISAIAH SOFAIR**Finance**

Assessing Leadership in Business -Finance: A Critical Investigation of Mary Barra

Advised by: Nell D'Auria

ROMOYE OJODDIA SOHAN**Biological Sciences**

Transcriptomics Analysis of Mouse Liver Tissue Exposed to the Bacterial Serine Glycine Lipid L-654

Advised by: Christopher Blesso

JIAYING SONG**Accounting**

The Flexibility of Firms Today. Has the Nature of Fixed versus Variable Costs of Firms Changed Over Time?

Advised by: Garth Monroe

JOHN HUGH STACHURA**Computer Science & Engineering**

A Comparative Analysis of Pandemic Control Technology for the Future of Virus Response

Advised by: Wei Wei

AVA GAIL STALLONE

Psychological Sciences

University Students Resilience, Mental Health, and COVID-19 Related Stressors

Advised by: Natalie Shook

DYLAN G. STAUDMYER

Mechanical Engineering

Method to Identify and Pursue Potential Novel Applications of Object Tracking Within Mechanical Engineering and Related Fields

Advised by: Bryan Weber

GWENDOLYN EVE STRICKLAND

Physiology & Neurobiology

*Interaction of Coupled Thermal and Osmotic Stressors in the Differential Gene Expression in *Haloflex volcanii**

Advised by: Mark Urban

MEGAN ROSE STURM

Physics

The SDSS-RM Project: UV/Optical Accretion Disk Structure Measurements with Hubble Space Telescope

Advised by: Jonathan Trump

RACHEL SULLIVAN

Political Science

Is Villainy Written in the Star (Wars)? How Father Figures Led Characters to and from the Dark Side

Advised by: Stephen Dyson

SIDDARTH SURESH

Computer Engineering

Modern Helicopter Flight Control System Design

Advised by: Ashwin Dani

JOHN MICHAEL SUTERA

Marketing

Assessing Leadership in Business - Marketing: A Critical Investigation of Daniel Ek

Advised by: Nell D'Auria

JOHN HARRIS SWANSON

Mechanical Engineering

Quench Plug for Ring Gear Manufacturing Process

Advised by: Ryan Cooper

ANGELA DELAPAZ TABOR

English

Dismantling the Nuclear Family in 21st-Century Literature

Advised by: Kathy Knapp

ANDREW TAMMARO

Individualized: Data Science

Advised by: Jun Yan

SABRINA TANG

Economics

A Time Series Analysis on Studying: Do Asian Americans Cause Other Races to Study More?

Advised by: Delia Furtado

NOOR TAWEH

Physiology & Neurobiology

Evaluating Functional Homeostatic Behavioral Outputs via Homecage and Open-field Test Assays: a Literature Review, Protocol Optimization, and Data Analysis

Advised by: Alexander Jackson

BRENDAN ANTHONY TAYLOR

Mechanical Engineering

Effect of Heat Exchangers on Heat Transfer in Unmanned Underwater Vehicles

Advised by: Chih-Jen Sung

CAILIN GRACE TENNIS

Management

Women in Leadership: Self Efficacy in Women Leaders

Advised by: Travis Grosser

ROSELYN KARLEY TERRAZOS-MORENO

Physiology & Neurobiology

A Review of ECoG and μ ECoG techniques to Study Auditory Processing

Advised by: James Chrobak

RACHEL THOMPSON

Biomedical Engineering

A Submission Process of Clinical Trial Study Investigating Stress of Women During Mammograms

Advised by: Krystyna Gielo-Perczak

NICOLAS TRICARD

Mechanical Engineering

Heterogeneous Effects on Spray Detonations

Advised by: Xinyu Zhao

KAMYA RUCHIR TRIVEDI

Finance

Assessing Leadership in Business - Finance: A Critical Investigation of Julie Sweet

Advised by: Nell D'Auria

RYAN CHRISTOPHER TROCKI

Biomedical Engineering

SARAH TSURUO

Biological Sciences

Sex-Specific Immunoendocrine Responses of 11-keto Testosterone and 17-oestradiol in Stickleback Fish

Advised by: Daniel Bolnick

MARA LEI TU

Environmental Sciences

Evaluating Urban Parks Accessibility and Equity: A Case Study of Hartford, CT and New Haven, CT

Advised by: Philip Birge-Liberman

LUCIE FALON TURKEL

Individualized: Comparative Literary & Cultural Studies

Comparing African Cultural Retention and its Effect on Racist Attitudes in the Music and National Identities of Cuba and the United States

Advised by: Jeffrey Ogbar

JESSICA NICOLE ULBRICH

Physiology & Neurobiology

Satellite Cells: The Muscle Stem Cell Niche and the Effects of Aging

Advised by: Joanne Conover

JASON VAILIONIS

Ecology & Evolutionary Biology

Symbiont Replacement by Pathogenic Fungus in North American Dog-Day Cicadas

Advised by: Christine Simon

ANAND GAURAV VAISH

Biomedical Engineering

Biomechanical Analysis of Cardiac Morphogenesis Using a Zebrafish Model

Advised by: Kazunori Hoshino

JOSLIN TRACY VALIYAVEETIL

Economics

The Impact of Information Shocks and Partisanship on the Evolution of Covid-19 in Connecticut

Advised by: David Simon

JASE RAFAEL VALLE

Urban & Community Studies

Urban Containment as A Form of Colonialism

Advised by: Stacy Maddern

ALEC JOHN VAN SLOOTEN

Mechanical Engineering

Comparison of 3-D Laser Scanning and Photogrammetry for Corrosion Damage Evaluation of Steel Beams

Advised by: Alexandra Hain

ALYSSA MARIE VARESEO

Biological Sciences

*In Vitro Antivirulence Activity of Cuminaldehyde Against *Clostridioides Difficile**

Advised by: Kumar Venkitanarayanan

MEGANA VARMA

Biological Sciences

Scent Attraction as a Mechanism of Host Choice of Phoretic Mites Associated with Neotropical Rolled-leaf Beetles

Advised by: Carlos Garcia-Robledo

SERENA VERMA

Physiology & Neurobiology

Evaluation of the Role of Eggs on Inflammation in Adults with Metabolic Syndrome Consuming a Plant-based Diet

Advised by: Geoffrey Tanner

ABIGAIL KATHLEEN VETSCH

Allied Health Sciences

Analyzing the Average Sports Medicine Budget in Secondary High Schools with Athletic Training Services

Advised by: Robert Huggins

VANESSA EMMA VLAUN

Molecular & Cell Biology

Thesis 1 Title: Voter Turnout in Presidential Elections: How Presidential Strength Affects Voter Turnout in Different Forms of Presidential Regimes, Thesis 2 Title: The Duality of World Order: How the Current World Order Exists in a Hybrid State Between Westphalia and the Liberal World Order

Advised by: Mark Longo

ANNA ZJ WANG

Finance

Social Media Sentiment and the Stock Market

Advised by: Alexander Amati

BINGNING WANG

Nutritional Sciences

Protein-polysaccharide Nanocomplexes or Hybrid Nanoparticles as Nanocarriers for Delivery of Curcumin

Advised by: Yangchao Luo

ERIC WANG

Computer Science & Engineering

Analysis of Simulated Traumatic Brain Injury Performance of Driving Simulator via Machine Learning Methods

Advised by: Dongjin Song

JORDAN CHEN WANG

Finance

The Impact of Crises on the Shift in Capital Flows from Active to Passive Investment Strategies

Advised by: Liping Qiu

ZONGQI WANG

Management Information Systems

Assessing Leadership in Business - Management Information Systems: A Critical Investigation of Ingvar Kamprad

Advised by: Nell D'Auria

ANDREW MICHAEL WHITE

Electrical Engineering

Smart Box for Transportation of Critical Articles

Advised by: Shalabh Gupta

CHRISTOPHER BRYAN WIEZBICKI

Political Science

Racial Disparities Ignored: Examining the Effects of a Ban on Affirmative Action on Increased Minority Arrest Rates in Michigan's Juvenile Justice System

Advised by: Kimberly Bergendahl

HOLLIS ANELIA WIVELL

Finance

Discrimination in the Loan Market: The Vicious Cycle of Historical Biases Continual Influence on the Oppression of Socioeconomic Mobility

Advised by: Paul Gilson

JOHN NATHAN WOHL

Computer Science

Art Sales Web Application

Advised by: Brian Daley

CHRISTOPHER DAVID WOLF

Political Science

Grad Paper 1: Voter Turnout in Presidential Elections and Grad Paper 2: Existing International Relations Theory and the Future of World Order

Advised by: Matthew Singer

KIERA ANN WOLFE

Computer Science

Utility Monitoring in Data Centers Using Machine Learning

Advised by: Caiwen Ding

NATALIE WONG

Music Education

The Role of Extracurricular Activities in the College Decision-Making Process

Advised by: Catherine Little

CHRISTINA YACOB

Nursing

Comparing Protein Expression in Colonic Samples for IBD, IBS and Healthy Patients using Nanostring GeoMX DSP.

Advised by: Wendy Henderson

JANE WHITMAN YALOF

English

A Study of Autism in Children's Literature

Advised by: Katharine Capshaw

AARON YAO

Finance

Assessing Leadership in Business - Finance: A Critical Investigation of Chamath Palihapitiya

Advised by: Nell D'Auria

KEEGAN T. YAO

Mathematics

The Ricci Flow on Noncompact Manifolds

Advised by: Ovidiu Munteanu

KAITLYN JIA-EN YEH

Biomedical Engineering

Bone-on-Chip: Engineering a Tissue Chip to Model the Human Bone Environment

Advised by: Yupeng Chen

ABIGAIL LAUREN YU

Physiology & Neurobiology

Effort-related Effects of Methylphenidate and Tetrabenazine on a Progressive Ratio Reinforcement Performance in Rats

Advised by: John Salamone

NICOLE KATHERINE ZATSERKOVNIY

Individualized: Law & the Environment

How Did Ambiguity Across State Laws Lead to Preemptive Federal Legislation Banning Microbeads?

Advised by: Matthew Singer

NICOLE KATHERINE ZATSERKOVNIY

Political Science

How Did Ambiguity Across State Laws Lead to Preemptive Federal Legislation Banning Microbeads?

Advised by: Matthew Singer

HARRY HARTNETT ZEHNER

Political Science

LILY ZHONG

Physiology & Neurobiology

Characterization of a Tachykinergic Projection to the Lateral Hypothalamic Area and its Role in Modulating Melanin-concentrating Hormone Neuron Subpopulations

Advised by: Alexander Jackson

MICHAEL ZHU

Molecular & Cell Biology

Consequences of Parent Involvement Laws on Access to Abortions

Advised by: Michele Baggio

AJSHE ZULFI

Health Care Management

Physician Mistrust Amongst Black Patients and the Potential Role and Consequences of High Healthcare Costs

Advised by: William Pace

University Honors Laureate

The University Honors Laureate designation recognizes enrolled Honors students who have completed depth in the major as well as breadth across the disciplines. Students who have earned the University Honors Laureate designation, demonstrate academic achievement, a commitment to community involvement and, and leadership. These scholars have also earned the distinction of Honors Scholar.

JACK HARRISON BERGANTINO

Economics

Darkness Falls Upon America's Backyard: An Evaluation of Central Appalachia's Past Economic Woes and a Blueprint for the Region's Future Economic Development

Advised by: Stephen Ross

JARED AMALDOSS LAWRENCE

Biological Sciences

An Exploration into the Genetics and Molecular Interactions of the Bombay Phenotype and Clinical Significance

Advised by: Charles Giardina

ALEXANDER MIKA

English

Examining Isolationism Through Drama

Advised by: Ellen Litman

MICHAEL JOSEPH RIBERDY

Physics

Infinite Volume Reconstruction Method QED Pion Mass Corrections on the Lattice

Advised by: Luchang Jin

SARAH TSURUO

Biological Sciences

Sex-Specific Immunoendocrine Responses of 11-keto Testosterone and 17-oestradiol in Stickleback Fish

Advised by: Daniel Bolnick



University Scholars

This prestigious and highly competitive program enables talented, motivated, and innovative students to design plans of study geared toward their special interests. Working closely with a committee of three faculty advisors, University Scholars undertake learning opportunities far beyond the typical plan of study, and produce significant scholarly and creative projects such as works of art and research theses. Graduating as a University Scholar is the highest academic honor the University bestows upon undergraduate students. Following is an alphabetical listing of graduating University Scholars, their majors, their project titles, their faculty advisors, and their project descriptions. The principal advisor for each student's University Scholar project is the first advisor listed. Students with the asterisk after their name are also Honors Scholars*.

BERK ATA ALPAY*

Mathematics and Computer Science

A Probabilistic Model of RNA Constraints on Viral Evolution

Advised by: Derek Aguiar, Mukul Bansal, Katherine Hall

Viral RNA can play a wide range of roles in addition to coding for proteins. Berk Alpay created a Bayesian statistical model of multiple sequence alignments that jointly considers nucleotide- and amino acid-level effects, thereby delivering insight into the mutational landscape of viral coding regions.

JULIE M. BRISSON*

Human Development & Family Sciences and Psychology

The Relationship Between Adverse Childhood Experiences and Allostatic Load Across the Lifespan: A Systematic Review and Meta-analysis

Advised by: Blair Johnson, Preston Britner, John Salamone

Using rigorous research synthesis methods, Julia's project examined the association between adverse childhood experiences and stress-related biomarkers over time. Different areas of physiological functioning and developmental stages were examined, and psychosocial factors were tested for moderation effects.

MARI ELIZABETH CULLERTON*

Environmental Sciences and Natural Resources

Field-based Disturbance Ecology, Remote Sensing, and Geospatial Analysis: An Interdisciplinary Approach to the Evaluation of the Role of Secondary Mortality Agents in Forest Disturbances

Advised by: Robert Fahey, Zhe Zhu, Thomas Worthley

*From 2014-2016, a mass defoliation event caused by the gypsy moth (*Lymantria dispar*) influenced thousands of acres of forested landscape in Southern New England. While the defoliation stressed vegetation, other agents contributed to the eventual mortality of the trees. The primary goals of this project was to investigate (i) the role of secondary mortality agents, specifically *Agilus bilineatus* and *Armillaria*, in an unprecedented mortality event largely focused on native oak species and (ii) how the use of satellite imagery and remote sensing may be used to better understand spatial and temporal patterns of secondary disturbance agents in forested ecosystems.*

PETER THOMAS FENTEANY*

Mathematics and Computer Science

Exploring the Riemann Hypothesis

Advised by: Keith Conrad, Benjamin Fuller, Alvaro Lozano-Robledo

Named after Bernhard Riemann, the Riemann Hypothesis (and its generalizations) is one of the most important open problems in mathematics today. The Riemann Hypothesis being true would imply that many interesting algorithms, including deterministic primality testing, are able to run in "efficient" polynomial time. This project will work towards the creation of a self-contained survey on the Riemann Hypothesis and Generalized Riemann Hypothesis. This survey will clearly explain the background necessary to understand the problem, the work underway on it, and the implications it has on primality testing algorithms and other applications.

JENIFER VIVIANA GAITAN*

History

Salir Adelante: Exploring the Systems of Support of First-Generation Latinx College Students in Their Pursuit of Higher Education

Advised by: Laura Bunyan, Ingrid Semaan, Joel Blatt

Jenifer Gaitan has spent the past few years studying first-generation Latinx college students and the obstacles they face as they complete their undergraduate education. She plans to enter the workforce to gain experience in program and project management before attending graduate school.

JAMES HE*

Molecular & Cell Biology

Identifying the Cell Composition and Clonal Diversity of Supratentorial Ependymoma Using Single Cell RNA-Sequencing

Advised by: Joseph LoTurco, Joanne Conover, Charles Giardina

Ependymoma is the third most common type of pediatric brain tumor, for which there are no treatment regimens that display consistent efficacy. The cells of a subtype, called Supratentorial Ependymoma, were profiled based on their genetic signatures. An assortment of genes unique to the tumor cells were found, and suspected in tumor development.

AMELIA CHIANG HURST*

Anthropology and Marine Sciences

Linking Human Activities to Coastal Water Quality in Southern New England: Past and Present

Advised by: Craig Tobias, Eleanor Ouimet, Jamie Vaudrey, William Ouimet

Amelia Hurst used sediment core analysis to examine the timing and effect of human influences on the marine environment in Mumford Cove, CT, from colonial through post-industrial times. Baseline conditions and climatic variability were first defined, allowing for the identification of ecosystem changes influenced by local legislation and land usage.

SHANELLE JONES*

Human Rights and Political Science

Untold Stories of the African Diaspora: The Lived Experiences of Black Caribbean Immigrants in the U.S.

Advised by: Charles Venator, Virginia Hettinger, Sara Silverstein

Shanelle Jones' project studies the journeys of West Indians who immigrated to the US for economic reasons from the 1980s-present day. Surveys and interviews conducted suggest CT West Indians, for the most part, overcome any initial downward economic trajectory, reporting a higher average yearly income than African American counterparts.

ALEXANDER MIKA*

English

Heavy Is the Head: A Play and Paper Examining Isolationism

Advised by: Ellen Litman, Frank Costigliola, Eveylyn Tribble

Alexander Mika wrote a play exploring the issues of ultranationalism and jingoism and how they are detrimental to foreign relations, while simultaneously being caustic to the internal wellbeing of a state. His goal with this play is to discuss how nationalism has no place in such an interconnected world, particularly in the United States, which is a nation of immigrants and ideas, e pluribus unum, and we must respect and celebrate the "pluribus" that constitute it.

JAYLA THEODORA MILLENDER***Africana Studies and Molecular & Cell Biology**

Impact of Angiogenic and Osteogenic Factors in the Presence of Biodegradable Piezoelectric Films In Vitro

Advised by: Thanh Nguyen, Kenneth Campellone, Shawn Salvant

Jayla Millender has spent the last two years investigating the potential for biocompatible factors to promote cell differentiation and development into transplantable structures. She has been accepted into a Master's of Engineering program where she hopes to further explore regenerative medicine.

KERRY ANNE MORGAN***Allied Health Sciences and Molecular & Cell Biology**

The Effects of MAPK Signaling on the Development of Cerebellar Granule Cells

Advised by: James Li, David Goldhamer, Jeanne McCaffery

This project aims to uncover the developmental mechanisms of granules cells in the cerebellum, specifically through observing the effects of the MAPK signaling pathway. Since granule cells are implicated in the most common pediatric neurological cancer, medulloblastoma, this research provides insight into faulty cell cycle differentiation cues.

SHREYA MURTHY***Finance and Human Rights and Individualized: Criminology**

Working Toward a Safer Future: Mitigating the Effects of Regulatory Capture in the Aviation Industry

Advised by: David L. Richards, Kimberley Bergendahl, Paul Gilson

Shreya Murthy has spent the past three semesters studying how regulatory capture occurs within the commercial aviation industry through comprehensive case studies and analysis of aviation accident data and economic and social indicators in an effort to put forth mitigation methods that include domestic law, human rights and human security principles.

SHANKARA L. NARAYANAN***History and Political Science**

Knowing China, Losing China: Discourse and Power in U.S.-China Relations

Advised by: Alexis Dudden, Frank Costigliola, Alexander Anievas

Shankara seeks to identify the significance of U.S.-China great-power competition, analyzing the evolution of Chinese policymakers' definition of core national interests, perception of geopolitical threats to those interests and domestic pressures creating an imperative to expand since 1978. She will compare China's rising-power trajectory and the methods of its strategy to three historic models: Imperial Germany (1862-1917), Imperial Japan (1868-1910) and the post-Civil War U.S. (1865-1917). This comparative methodology will reveal how key differences in China's strategic thinking may have influenced its rise since 1978, and how its future strategy may differ from prior rising powers.

MATTHEW J. PICKETT**Chemistry**

Design and Characterization of a Novel Process for Organophosphate Decontamination

Advised by: Steven Suib, Alfredo Angeles-Boza, Jessica Rouge

Matthew Pickett has been examining the degradation of toxic organophosphate chemicals that cause harm to humans and the environment. The project developed and characterized an environmentally friendly structure used to stabilize enzymes capable of degrading these toxins, offering a novel method of efficient organophosphate decontamination.

SIMRAN SEHGAL***Biomedical Engineering**

The Enterprise of Health: An Evaluation of the Accessibility of Durable Medical Equipment in Low-Income Households

Advised by: Cesar Abadia-Barrero, Patrick Kumavor, Sally Reis

In our biotechnologically forward society, capitalistic principles have inverted our healthcare delivery philosophy: paradoxically, the highest need of care is met with the lowest access to care due to the inaccessibility of medical resources and high costs of medical devices. The disability community carries a disproportionate burden of disease, notably in health care coverage and services for durable medical equipment. Simran's proposed project seeks to broadly study the gaps in our healthcare system that has increased difficulty of accessing durable medical equipment, specifically analyzing the interconnectivity of health insurance, education, and poverty through the lived experiences of individuals with disabilities.

MEGAN ROSE STURM***Physics**

The SDSS-RM Project: UV/Optical Accretion Disk Measurements for Supermassive Black Holes with Hubble Space Telescope

Advised by: Jonathan Trump, Richard Jones, Kyungseon Joo

Supermassive black holes are fascinating objects residing in the center of every massive galaxy. Megan Sturm has been studying the structure of the accretion disk around supermassive black holes with her advisor, Professor Jonathan Trump. She will be continuing astronomy research and pursuing a PhD in Physics at Montana State University next fall.

JASON VAILIONIS***Ecology & Evolutionary Biology**

Symbiont Replacement by Pathogenic Fungus in North American Dog-Day Cicadas

Advised by: Chris Simon, Paul Lewis, Jonathan Klassen

Many insects form symbiotic relationships with microorganisms allowing them to survive on specialized, nutrient poor diets. After millions of years, these symbionts can evolve to lose essential functions forcing the host insect to compensate by acquiring a new symbiont. In cicadas, one ancestral bacterial symbiont is undergoing seemingly maladaptive evolution and being replaced by a new symbiont in the wild. The new symbiont is evolved from a fungal pathogen which cicadas have domesticated many times in parallel. I am studying the transition of this pathogen to a mutualistic symbiont using genomic sequencing of cicada-associated fungi all over North America.

ANAND GAURAV VAISH***Biomedical Engineering**

Image-Based Biomechanical Analysis of Cardiac Morphogenesis using a Zebrafish Model

Advised by: Kazunori Hoshino, David Daggett, David Goldhamer

Anand Vaish's project consisted of studying embryonic heart development using a zebrafish model. His goal was to better quantify how the biomechanical properties of the embryo heart change throughout its formation. He hopes this research can help develop new diagnostic tools and therapeutics for congenital heart disease.

LILY ZHONG***Physiology & Neurobiology**

Characterization of a Tachykinergic Projection to the Lateral Hypothalamic Area and its Role in Modulating Melanin-concentrating Hormone Neuron subpopulations

Advised by: Alexander Jackson, Geoffrey Tanner,

Anastasios Tzingounis

Lily Zhong's project focuses on the neurological basis of stress and anxiety. By characterizing a novel neural projection in the mouse brain's lateral hypothalamic area, Lily hopes to elucidate the neuronal mechanisms underlying stress and anxiety, which could potentially contribute to future therapeutic strategies for human anxiety disorders.

The Honors Board of Associate Directors

The Honors Board of Associate Directors includes faculty members, Honors Program staff, and students from the Honors Council. The Board advises and assists with the work of the Honors Program.

Bridget Abril, Class of 2024

Brian Aneskievich, School of Pharmacy

Maureen Armstrong, Committee Rep/Scholastic Standards

Dylan Audette, Molecular and Cell Biology (Hartford)

Johnny Banks, Academic Advisor (Avery Point)

Emily Blackburn, Class of 2021

Judy Brown, School of Nursing

Kelly Burke, Chemical and Biomolecular Engineering

Mary Burke, College of Liberal Arts and Sciences

Jamie Caruso, Bachelor of General Studies Program (Waterbury)

Jaclyn Chancey, Honors Program

James Chrobak, College of Liberal Arts and Sciences

Lisette Donewald, Class of 2022

Laura Donorfio, College of Liberal Arts and Sciences (Waterbury)

Emily Findlan, Class of 2021

Leigh Fine, Honors Program

Thomas George, Class of 2022

Maria-Luz Fernandez, Nutritional Sciences

Travis Grosser, School of Business

Anahi Gutierrez, Class of 2024

Kaitlin Heenehan, Honors Program (Stamford)

Virginia Hettinger, College of Liberal Arts and Sciences

Claudia Koerting, Marine Sciences (Avery Point)

Jennifer Lease Butts, Honors Program

Catherine Little, Neag School of Education

Richard Luddy, Physics (Hartford)

Deborah McDonald, School of Nursing

Kristiane Ohlhorst

Rachel O'Neill, College of Liberal Arts and Sciences

Eric Schultz, Committee Rep (Senate C&C)

Lavanya Sambaraju, Class of 2022

John Richardson, School of Fine Arts

Patricia Szarek, Honors Program

Rebecca Troeger, Academic Center Coordinator (Avery Point)

Richard Watnick, College of Liberal Arts and Sciences (Stamford)

The Honors Program Staff

Gregory Champion, Program Assistant, Honors Residential Communities and Programming | **Jaclyn Chancey**, Associate Assistant

Director for Curriculum, Assessment, and Planning | **Leigh Fine**, Assistant Director, Honors Residential Communities and Programming | **Kristen Dostaler**, Coordinator of Peer Leadership Programs, Program Coordinator, Honors Residential Communities and Programming | **Brittany Engert**, Program Assistant, Honors Residential Communities and Programming

Jason Gordon, STEM Scholar Advisor | **Kaitlin Heenehan**, Stamford Honors Program Assistant Director

Anne Kim, Assistant Director for Honors Advising | **Jennifer Lease Butts**, Associate Assistant Vice Provost, Honors and Enrichment Programs & Director, Honors Program | **Ellen Mayo**, Administrative Manager

Patricia Szarek, Associate Director for Enrollment Management