UConn IDEA Grant
imagine / develop / engage / apply

Spring 2017 UConn IDEA Grant Award Recipients

Congratulations to the 29 UConn undergraduates who have been awarded UConn IDEA Grants! 19 of the award recipients will be completing individual projects, and 10 will be working on collaborative group projects.

The award recipients represent a variety of disciplines, from nursing to elementary education, animal science to biomedical engineering. They will work on designing prototypes and software systems; producing short films, graphic novels, and animations; developing educational programs; and conducting independent research.

Special thanks to the faculty and staff that supported student applications to the UConn IDEA Grant and to those who will be mentoring the award recipients as they complete their projects.

Individual Projects

Mary Accurso '18 (Molecular and Cell Biology, CLAS)
Connecting Science to the Digital Arts Through Scientific Animations
Mentors: Anna Lindemann, Digital Media and Design, SFA; Mary Bruno, Molecular and Cell Biology, CLAS

- Most of the complex biological pathways at the molecular level are too small to visualize with the naked eye. In order to aid in education about these topics and pathways, Mary will create animations that can be utilized to provide a visual aid that is informative and portrays the beauty of the biology.

Ian Barron '18 (Molecular and Cell Biology, CLAS; Philosophy, CLAS)
Ghosts of the Past: How Land and Population Transfers in Postwar Poland and Germany influence the Modern Right
Mentor: Charles Lansing, History, CLAS

- Ian's project examines the relationship between the postwar land and population transfers between Germany, Poland, and the USSR, and modern right-wing nationalist politics in Germany and Poland.

Matthew Bilmes '18 (Digital Media and Design, SFA)
Exit: A Short Film
Mentor: Tim Miller, Digital Media and Design, SFA

- Matthew will produce and direct an original short science fiction film. This film focuses on how a dystopian society balances individual sacrifice with social good.

Caitlyn Cody '19 (Psychological Sciences, CLAS)
Investigating the Effects of Acoustic Cues on the Perception of Species-Specific Vocalizations
Mentor: Heather Read, Psychological Sciences, CLAS

- Rats use a variety of sound cues, such as tonal frequency and sound duration, to distinguish between a multitude of social sounds. Caitlyn's research project investigates the ability of rats to distinguish social vocalizations when these perceptual cues are altered.

Gina DiGiacomo '18 (Biomedical Engineering, ENG)
Developing a Syringe Guard to Prevent Accidental Needlestick Injuries
Mentor: Christine Meehan, Nursing, NUR
- Gina's project aims to develop a working prototype that will safeguard syringes and prevent accidental needlestick injuries after injection, for use by healthcare workers.

Abigail Golec '18 (Technical Theater and Design, SFA)
Original Concept Album
Mentor: Edward Weingart, Dramatic Arts, SFA
- While studying abroad in The Netherlands, Abigail will travel to historical sites in Europe, take field recordings of the sites and the cities that surround them, and use the recordings to compose songs that connect the historical site to the modern city.

Yanlin Hu '18 (Art, SFA)
Calligraphy in the Expanded Field
Mentor: Monica Bock, Art and Art History, SFA
- Yanlin will explore the relationship between calligraphy and sculpture by using clay to translate calligraphy into a three-dimensional form, fusing both into new and exciting sculptural objects and installations.

Leena Kader '18 (Molecular and Cell Biology, CLAS)
Assessment, Intervention, and Management of Lower Back Pain
Mentor: Angela Starkweather, Nursing, NUR
- Leena will create an assessment and intervention to manage the persistent, chronic lower back pain experienced by a small subset of patients who participated in a large Center of Advancement in Managing Pain (CAMP) study.

Rohit Kandala '19 (History, CLAS)
Living History: A Holistic Model
Mentor: Frank Costigliola, History, CLAS
- Rohit aims to develop a new model that conceptualizes and conveys history in a holistic way making the study of history more accessible to a broad public.

Miriam Katz '19 (Physiology and Neurobiology, CLAS)
The Effect of Scents on Dorsal and Ventral Hippocampal Place Cell Remapping
Mentor: Etan Markus, Psychological Sciences, CLAS
- Place cells in the hippocampus of the brain are responsible for spatial memory formation and navigation. To better understand the mechanism behind place cell remapping, Miriam will use a rat model to determine how different areas of the hippocampus work together to encode novel scent experiences.

Courtney Lopiano '18 (Nursing, NUR)
A Battle on Opiates: The NICU Nurse's Perspective on Neonatal Abstinence Syndrome
Mentor: Xiaomei Cong, Nursing, NUR
- Courtney will conduct a clinical and educational study addressing healthcare practice on high risk infants with Neonatal Abstinence Syndrome from the perspective of neonatal nurses. She will develop innovative materials to offer nurses support and information to aid in their work with this vulnerable population.

Taylor Mangini '18 (Psychological Sciences, CLAS)
Levels of Anxiety for Adolescents in the United States: A Meta-Analysis
Mentor: Blair Johnson, Psychological Sciences, CLAS
- Taylor will examine the levels of anxiety of adolescents in the United States and explain the trends and patterns in the findings by creating a meta-analysis using both available studies and the Youth Behavior Risk Surveillance System (YRBSS) database.

Shashank Mishra '19 (Physiology and Neurobiology, CLAS; Molecular and Cell Biology, CLAS)
Investigating the Role of a Long Noncoding RNA, HAGLR, in the Progression of Hepatocellular Carcinoma
Mentor: Xiaobo Zhong, Pharmacy, PHARM
- The aim of Shashank's project is to implicate the upregulation of a long noncoding RNA, HAGLR, in the proliferation, invasion, and metastasis characteristic of Hepatocellular carcinoma, one of the leading causes of cancer-related deaths, via RNAi-based gene knockdown approaches.

Timothy Nolan Jr. '18 (IMJR: Computational Neurobiology, CLAS; Physiology and Neurobiology, CLAS)
Optimizing Light Pulse Sequences for Optogenetic Suppression of Auditory Cortical Responses to Rhythmic Sound Sequences
Mentor: Heather Read, Psychological Sciences, CLAS
- Timothy will study auditory discrimination in rats by silencing neurons of the auditory cortex (AC) using a technique known as optogenetics. With the silencing of said AC neurons, it is hypothesized that the rats will no longer be able to discriminate between different rhythmic sounds.

Ellen Quintana '20 (Nursing, NUR)
Reducing Glove Waste in the Medical Environment
Mentor: Christine Meehan, Nursing, NUR
- Ellen will design and prototype a dispenser for medical exam gloves that combats glove waste and addresses pre-use contamination in a medical environment.

Emily Regan '19 (Art, SFA)
Foxhead Manor: A Whimsical and Paranormal Graphic Novel of New England's History in the Gilded Age
Mentor: John O'Donnell, Art and Art History, SFA
- Emily plans to travel to Newport, Rhode Island to research the Gilded Age in New England and use this research to complete an illustrated graphic novel that contains diverse characters and a whimsical, paranormal plot that appeals to adults.

Maya Schlesinger '18 (Animal Science, CAHNR)
Temporal Changes in Muscle Development in the Chicken Embryo as Influenced by Probiotic Supplementation
Mentor: Mary Anne Amalaradjou, Animal Science, CAHNR
- Maya will use fluorescently stained muscle tissue to understand how muscle tissue changes throughout embryonic development of broiler chickens, and specifically how treatment with probiotics, or beneficial bacteria, influences this muscle development.

Garrett Soler '18 (Biomedical Engineering, ENG)
Engineering A Cure: An Economical & Ergonomic Hydrocephalus Software System
Mentor: Kazunori Hoshino, Biomedical Engineering, ENG
- Garrett's project focuses on development of a program for handheld cellular devices that works in conjunction with recently fabricated "Smart Shunt" technology for hydrocephalus application. The program will interact with the shunt and relay information back to patients.

Casey Stotler '19 (Nursing, NUR)
Using Implementation Science to Assess Delivery Room Management
Mentor: Jacqueline McGrath, Nursing, NUR
- Casey will conduct an in-depth descriptive investigation into interdisciplinary care provided during delivery room resuscitations occurring at Connecticut Children's Medical Center to assess adherence to Neonatal Resuscitation Protocol guidelines.

Group Projects

Bailey Andrew '20 (Electrical Engineering, ENG)
Amy Robinson '18 (Electrical Engineering, ENG)
Implementing Small Scale Vertical Axis Wind Turbines on UConn Campuses
Mentor: Ali Bazzi, Electrical Engineering, ENG

- Bailey and Amy aim to increase use of wind power on campus by building isolated, small scale vertical axis wind turbines on covered bus stops to charge phones, lights, and LED display screens, increasing renewable energy's presence on campus and showcasing UConn engineering to the student body.

Kristin Burnham '18 (Pathobiology, CAHNR; Molecular and Cell Biology, CLAS)
Christina Van Deventer '18 (Marketing, BUS)
Starting Conversations for Health Empowerment in Connecticut High Schools
Mentor: TBD

- Kristin and Christina will develop a peer education model that brings UConn undergraduates into high school health classes to start crucial conversations that empower high school students to make educated decisions and promote their own mental and sexual health.

Philip Gitman '20 (Chemical Engineering, ENG)
Trevor Svec '18 (Computer Engineering, ENG)
WickAway
Mentors: John Ayers, Electrical and Computer Engineering, ENG; Luyi Sun, Chemical and Biomolecular Engineering, ENG

- Philip and Trevor will prototype an electromechanical device for a candle that automatically extinguishes the flame after a set amount of time. The main purpose of this device is to prevent candle-caused fires.

Kathrine Grant '19 (Secondary Education, ED; English, CLAS)
Priscilla Grillakis '19 (Speech, Language and Hearing Sciences, CLAS)
Isabella Horan '19 (Elementary Education, ED)
Madeleine Rusk '19 (Elementary Education, ED)
Peer Tutoring and Translation: Mentoring for Equitable Education
Mentors: Ronald Beghetto, Educational Psychology, ED; Adrian Garcia-Sierra, Speech, Language, and Hearing Sciences, CLAS

- The team will create a tutoring and translation program pairing Emergent Bilingual students with bilingual peer mentors to foster growth in language and social connections. To bolster equity in education, they will develop a supplemental curriculum, a mentor program, and an assessment structure.