



## 2026 Summer Undergraduate Research Fund (SURF) Awards

Congratulations to the 39 undergraduate SURF Award recipients for Summer 2026! These UConn students were selected from a strong group of applicants representing diverse areas of academic inquiry.

Thank you to the research advisors and other faculty members who supported SURF applicants, to the faculty who served on the selection committee, and to the many generous supporters who make this program possible.

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### **Kathryn Ausere '28 (Chemical Engineering, ENG)**

Project Title: *Evaluating the Effectiveness of Three Types of Tack Coats at Reducing Tracking Under Various Humidity Conditions*

Faculty Mentor: Dr. Alex Bernier, Connecticut Advanced Pavement Lab

### **April Bitetti '27 (Natural Resources, CAHNR)**

Project Title: *Botanical Composition and Foraging Behavior of the South African Giraffe*

Faculty Mentor: Dr. Isaac Ortega, Natural Resources and the Environment

### **Josephine Burke '27 (Political Science, CLAS)**

Project Title: *Governing in Crisis: A Critical Examination of Public Land-Grant Universities in the Post-COVID Era*

Faculty Mentor: Dr. Sandy Grande, Political Science & Native American and Indigenous Studies

### **Caroline Burkhardt '28 (Anthropology & Molecular and Cell Biology, CLAS)**

Project Title: *Chronic Illness Experiences on the Hopi Reservation*

Faculty Mentor: Dr. Sarah Willen, Anthropology

### **Rakshan Chadha '27 (Molecular and Cell Biology & Statistics, CLAS)**

Project Title: *Optimizing Tumor Delivery of Barium Titanate Nanoparticles for Radiation Therapy in a Murine Pancreatic Cancer Model*

Faculty Mentor: Dr. Henry Smilowitz, Cell Biology

### **Brady Cheneski '28 (Physiology and Neurobiology & Molecular and Cell Biology, CLAS)**

Project Title: *Exploring the Role of Hypothalamic Inputs to the Dentate Gyrus in Aversive Context Discrimination and Generalization*

Faculty Mentor: Dr. Sebnem Tuncdemir, Neuroscience

### **Anna Coulter '27 (Molecular and Cell Biology, CLAS)**

Project Title: *Synthesis of Photoswitchable NF 110 Analogs: Investigating P2X3 Receptors in Oral Pain*

Faculty Mentor: Dr. Michael Kienzler, Chemistry

### **Avery DeSilva '27 (Ecology and Evolutionary Biology, CLAS)**

Project Title: *A Super-pangenome of Magnolias, One of the Oldest Lineages of Flowering Plants*

Faculty Mentor: Dr. Jill Wegrzyn, Ecology and Evolutionary Biology

### **Chevintha Edirisinghe '27 (Physiology and Neurobiology, CLAS)**

Project Title: *Investigating Novel Protein Regulators of Lymphatic Endothelial Cell Junction Morphology*

Faculty Mentor: Dr. Georgia Zarkada, Physiology and Neurobiology

**Elizabeth Evans '28 (Molecular and Cell Biology, CLAS)**

Project Title: *Altered Proliferation Dynamics of MyoD- and Myf5-Deficient Satellite Cells During Skeletal Muscle Regeneration*

Faculty Mentor: Dr. David Goldhamer, Molecular and Cell Biology

**Katherine Foley '27 (Molecular and Cell Biology, CLAS)**

Project Title: *Characterization of Scx+ Cell Proliferation in Fibrodysplasia Ossificans Progressiva*

Faculty Mentor: Dr. David Goldhamer, Molecular and Cell Biology

**Molly Forker '27 (Physiology and Neurobiology, CLAS)**

Project Title: *Glycinergic Neurons Contribute to Febrile Seizures and Premature Death in a Mouse Model of Dravet Syndrome*

Faculty Mentor: Dr. Daniel Mulkey, Physiology and Neurobiology

**Ashly Gasior '27 (Chemistry & Physics, CLAS)**

Project Title: *Probing Spin-correlated Radical Pair Evolution in Donor-chiral Bridge-acceptor Molecules Using Photo-CIDNP*

Faculty Mentor: Dr. Tomoyasu Mani, Chemistry

**Shailaja Gillett '27 (Molecular and Cell Biology, CLAS)**

Project Title: *Parafibromin/ $\beta$ -Catenin Interaction as a Potential Mechanism for CDC73 Tumor Suppressive Functions*

Faculty Mentor: Dr. Jessica Costa, Regenerative Medicine and Skeletal Development

**Kylie Hays '27 (Biological Sciences, CLAS & Natural Resources, CAHNR)**

Project Title: *Influence of Noise Pollution on Behavior of the Eastern Gray Squirrel (*Sciurus carolinensis*)*

Faculty Mentor: Dr. Sarah Knutie, Ecology and Evolutionary Biology

**Cassandra Hryniewicz '27 (Environmental Sciences, CAHNR)**

Project Title: *Optimizing Salt Marsh Restoration: Can Planting Design Alter Plant Biomass and Carbon Sequestration?*

Faculty Mentor: Dr. Beth Lawrence, Natural Resources and the Environment

**Devesh Karthik '27 (Physics & Mathematics, CLAS)**

Project Title: *Timescales for Equilibration in Many-Body Quantum Systems*

Faculty Mentor: Dr. Lea Ferreira dos Santos, Physics

**Maya Kelly '27 (Molecular and Cell Biology, CLAS)**

Project Title: *A Novel Role for RNA Modifications in Substance Use Disorder*

Faculty Mentor: Dr. Gregory Sartor, Pharmaceutical Sciences

**Jenna Kent '27 (Ecology and Evolutionary Biology, CLAS)**

Project Title: *Investigating the Polyploidy of an Arctic Willow*

Faculty Mentor: Dr. Jill Wegrzyn, Ecology and Evolutionary Biology

**Nahyun Kim '27 (Pharmacy Studies, PHARM)**

Project Title: *Understanding the Structure-Function Relationship of mRNA-Lipid Nanoparticles: Post-Lyophilization and Storage*

Faculty Mentor: Dr. Xiuling Lu, Pharmaceutical Sciences

## 2026 SURF Award Recipients

### **Philip LeShane '28 (Robotics Engineering, ENG)**

Project Title: *Robotic Surgery Control Tool With Slip Haptic Feedback Capability*

Faculty Mentor: Dr. Yuri Gloumakov, Electrical and Computer Engineering

### **Derrick Li '28 (General Program in Art, SFA)**

Project Title: *Spin Polarization of Luminescent TTM Radicals via Chiral D-X-A Energy Transfer*

Faculty Mentor: Dr. Tomoyasu Mani, Chemistry

### **Zhiwei Liang '27 (Robotics Engineering, ENG & Mathematics, CLAS)**

Project Title: *Algorithmic Implementation of Safety Verification and Kinematic Control for a 6-DOF Manipulator*

Faculty Mentor: Dr. Chang Liu, Mechanical, Aerospace, and Manufacturing Engineering

### **Danielle Lillis '27 (History, CLAS)**

Project Title: *Roman Anti-Druid Policy and Cultural Change in Roman Britain*

Faculty Mentor: Dr. Kevin Feeney, History

### **Lucy Liu '27 (Statistics & Applied Mathematical Sciences, CLAS)**

Project Title: *Improving Data Clustering with Quantum Cognition Machine Learning*

Faculty Mentor: Dr. Haim Bar, Statistics

### **Abigail McFarland '27 (Physiology and Neurobiology, CLAS)**

Project Title: *Decoding Natural Locus Coeruleus-Norepinephrine Dynamics During Taste Sampling Using Machine-Learning Analysis of Orofacial Behaviors*

Faculty Mentor: Dr. Natale Sciolino, Physiology and Neurobiology

### **James McNicol '28 (Biomedical Engineering, ENG)**

Project Title: *Flexible Enzyme-Functionalized GFET Biosensor for the Electrochemical Detection of L-Glutamate*

Faculty Mentor: Dr. Yi Zhang, Biomedical Engineering

### **Trang Nguyen '28 (Chemistry, CLAS)**

Project Title: *Evaluating How Microbubble Shell Microporosity Affects Hydrophobic Drug Loading and Stability*

Faculty Mentor: Dr. Cao Thuy Giang Nguyen, Institute of Materials Science

### **Neeka Oghli '28 (Physiology and Neurobiology & IMJR: Interdisciplinary Reproductive Health Science, CLAS)**

Project Title: *Investigating the Role of Octopaminergic System in DILP8/Lgr3-mediated Spontaneous Ovulation in *Drosophila melanogaster**

Faculty Mentor: Dr. Jianjun Sun, Physiology and Neurobiology

### **Wesley Ong '27 (Molecular and Cell Biology, CLAS)**

Project Title: *Investigating the Molecular Building Blocks of Hypocretin/Orexin Synapses*

Faculty Mentor: Dr. Alexander Jackson, Physiology and Neurobiology

### **Angelina Park, Dec. '26 (Digital Media & Design, SFA)**

Project Title: *Slow Down*

Faculty Mentor: Dr. Justin Liberman, Digital Media & Design

2026 SURF Award Recipients

**Tuyet Nhung Phan '28 (Molecular and Cell Biology, CLAS)**

Project Title: *Development of Doxycycline-Inducible CRISPR-Interference Screening System to Identify Genes Involved in Tet2-Deficient Clonal Hematopoiesis*

Faculty Mentor: Dr. Hideyuki Oguro, Cell Biology

**Jay Podziewski '27 (Molecular and Cell Biology, CLAS)**

Project Title: *The Electroporation of Atlantic Horseshoe Crab (*Limulus polyphemus*) Amebocytes as a First Step Towards Sustainable LAL Production*

Faculty Mentor: Dr. Kate Castellano, Institute for Systems Genomics

**Aiden Sands '28 (Computer Science, ENG)**

Project Title: *Prediction of RNA Secondary Structure from Oxford Nanopore Translocation Times*

Faculty Mentor: Dr. Derek Aguiar, School of Computing

**Gabrielle Grace Setiadi '27 (Molecular and Cell Biology & IMJR: Bioinformatics, CLAS)**

Project Title: *The Role of BRD4 in Alveolar Macrophage Activation*

Faculty Mentor: Dr. L. Cody Smith, Pharmaceutical Sciences

**Nicolette Silva '28 (Nursing, NUR)**

Project Title: *Differential Effects of Maternal and Paternal Caregiving on Daily NISS Stress Score in Preterm Infants*

Faculty Mentor: Dr. Sharon Casavant, Nursing

**Madeleine Smith '27 (Ecology and Evolutionary Biology, CLAS)**

Project Title: *Exploring a Potential Mechanism Underlying Tolerance to Parasitism in Eastern Bluebird Nestlings*

Faculty Mentor: Dr. Sarah Knutie, Ecology and Evolutionary Biology

**Pragyan Yadav '28 (Physics, CLAS & Computer Science, ENG)**

Project Title: *A Network-Based Analysis of the Cosmic Web in Cosmological Simulations*

Faculty Mentor: Dr. Daniel Angles-Alcazar, Physics

**Anthony Zuo '27 (Physiology and Neurobiology, CLAS)**

Project Title: *Impact of Age on OI Stem Cell Therapy Effectiveness*

Faculty Mentor: Dr. Benjamin Sinder, Orthopedic Surgery