



**ENRICHMENT PROGRAMS**

OFFICE OF  
UNDERGRADUATE RESEARCH

## 2015 Summer Undergraduate Research Fund (SURF) Awards

Congratulations to the thirty-five UConn undergraduates offered SURF Awards for Summer 2015! These students were selected from an exceptionally strong group of applicants representing a wide range of 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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**1. Omar Allem, Chemistry (2016)**

Project Title: *Self-Healing Double Network Hydrogels*

Faculty Mentor: Dr. Thomas Seery, Department of Chemistry

**2. Yumna Arif, Biological Sciences (2016)**

Project Title: *Reversing the Effort-related Impairments Induced by the Pro-inflammatory Cytokine Interleukin-1 Beta with Curcumin*

Faculty Mentor: Dr. John Salamone, Department of Psychology

**3. Megan Brady, Molecular and Cell Biology (2016)**

Project Title: *Determination of Closely Related Protein Structures by NMR*

Faculty Mentor: Dr. Andrei Alexandrescu, Department of Molecular and Cell Biology

**4. Daniell Carvalheiro, Human Development and Family Studies (Dec 2015)**

Project Title: *Cross-Cultural Views on Parent and Teacher Roles in Children's Education*

Faculty Mentor: Dr. Sara Harkness, Department of Human Development and Family Studies

**5. Kelly Chan, Pharmacy Studies (2016)**

Project Title: *Itraconazole Analogues as Anti-Cancer Hedgehog & Angiogenesis Inhibitors*

Faculty Mentor: Dr. M. Kyle Hadden, Department of Pharmaceutical Sciences

**6. Brock Chimileski, Physiology and Neurobiology (2017)**

Project Title: *Defining Orexin Neuron Diversity in the Lateral Hypothalamic Area through Single-Cell Gene Expression Profiling*

Faculty Mentor: Dr. Alexander Jackson, Department of Physiology and Neurobiology

**7. Thomas Cotton, Biomedical Engineering (2017)**

Project Title: *An Improved Treatment of Head and Neck Tumors*

Faculty Mentor: Dr. Liisa Kuhn, Center for Regenerative Medicine and Skeletal Development, UConn Health

**8. Joseph DeSisto, Ecology and Evolutionary Biology (2017)**

Project Title: *A New Species of Lithobiid Centipede from Virginia*

Faculty Mentor: Dr. Jane O'Donnell, Department of Ecology and Evolutionary Biology

**9. Christine Doherty, Physiology and Neurobiology (2016)**

Project Title: *Dendritic Morphology of Layer II Neurons in Mice with Mutations Associated with Dravet Syndrome and Infantile Epileptic Encephalopathy*

Faculty Mentor: Dr. Joseph LoTurco, Department of Physiology and Neurobiology

**10. Kayleigh Fay, Nutritional Sciences (2016)**

Project Title: *Effectiveness of Nutrition Education in Competitive Irish Dancers*

Faculty Mentor: Dr. Nancy Rodriguez, Department of Nutritional Sciences

- 11. Garrett Fontaine, Kinesiology (2016)**  
Project Title: *An Analysis of Player Work Load and Workout Recovery*  
Faculty Mentor: Dr. Douglas Casa, Department of Kinesiology
- 12. Aiden Ford, Physiology and Neurobiology (2017)**  
Project Title: *A Determination and Examination of the Cognitive Phenotype of the TS2-neo Mice Model of Autism*  
Faculty Mentor: Dr. R. Holly Fitch, Department of Psychology
- 13. Shaina Forte, Nursing (2016)**  
Project Title: *How Early Life Stressors Alter the Gut Microbiome of Preterm Infants, as Measured by a New Tool: The Accumulated Pain/Stressor Scale*  
Faculty Mentor: Dr. Xiaomei Cong, School of Nursing
- 14. Elina Griggs, Environmental Studies (2016)**  
Project Title: *Fueled by Fabrication: Do Fictional Narratives Influence Environmental Behavior?*  
Faculty Mentor: Dr. Wayne Franklin, Department of English
- 15. Asahi Hoque, Molecular and Cell Biology & Human Rights (2016)**  
Project Title: *Utilization of Cell Free Translation to Test Post-Glycosylation Diversification Compounds*  
Faculty Mentor: Dr. Victoria Robinson, Department of Molecular and Cell Biology
- 16. Leanne Jankelunas, Animal Science & Pathobiology (2016)**  
Project Title: *Investigating the Efficacy of Plant-derived Antimicrobials in Increasing the Sensitivity of Methicillin Resistant Staphylococcus aureus (MRSA) and Vancomycin Resistant Staphylococcus aureus (VRSA) to Antibiotics*  
Faculty Mentor: Dr. Kumar Venkitanarayanan, Department of Animal Science
- 17. Rofina Johnkennedy, Molecular and Cell Biology & English (2016)**  
Project Title: *Novel Antimicrobial Compound Discovery in the Trachymyrmex septentrionalis Symbiosis*  
Faculty Mentor: Dr. Jonathan Klassen, Department of Molecular and Cell Biology
- 18. Shaan Kamal, Molecular and Cell Biology (2016)**  
Project Title: *Computational Investigations into the Molecular Underpinnings of Eyesight Signaling Pathways*  
Faculty Mentor: Dr. Eric May, Department of Molecular and Cell Biology
- 19. Roxanne Lapierre, Nursing (2016)**  
Project Title: *Direct Paternal Participation in Bottle Feeding and its Effects on Feeding Patterns of Full-Term Infants*  
Faculty Mentor: Dr. Ruth Lucas, School of Nursing
- 20. Nathan Leclair, Molecular and Cell Biology & Physiology and Neurobiology (2016)**  
Project Title: *A New Role for JMY in Tumorigenesis*  
Faculty Mentor: Dr. Kenneth Campellone, Department of Molecular and Cell Biology
- 21. Justin Letendre, Biomedical Engineering (2016)**  
Project Title: *Lipid-Coated Quantum Dots: A Novel In-Vivo Imaging Probe*  
Faculty Mentor: Dr. Mu-Ping Nieh, Department of Chemical and Biomolecular Engineering

**22. Jessica Liu, Elementary Education (2016)**

Project Title: *Classroom Discourse: Conversation Patterns of High Potential Students from Underrepresented Populations*

Faculty Mentor: Dr. Catherine Little, Department of Educational Psychology

**23. Brandon Luxkaranayagam, Physiology and Neurobiology & Molecular and Cell Biology (2016)**

Project Title: *Investigation of Skeletal Muscle-Specific Gene Regulation*

Faculty Mentor: Dr. Leighton Core, Department of Molecular and Cell Biology

**24. Laura Mandell, Nursing (2016)**

Project Title: *Weight and Age as Predictors of Persistent Infant Car Seat Challenge Failure*

Faculty Mentor: Dr. Michele DeGrazia, Director of Nursing Research, Neonatal Intensive Care, Boston Children's Hospital

UConn Mentor: Dr. Jacqueline McGrath, School of Nursing

**25. Keesha Miller, Human Development and Family Studies (2016)**

Project Title: *Investigating the Relationship between Language and Number Cognition*

Faculty Mentor: Dr. Marie Coppola, Departments of Psychology and Linguistics

**26. Isabel Nip, Biological Sciences (2017)**

Project Title: *Exploring the Role of the Cytoskeleton in Neurodegenerative Diseases*

Faculty Mentor: Dr. Kenneth Campellone, Department of Molecular and Cell Biology

**27. Fejiro Okifo, Biological Sciences (2016)**

Project Title: *Effects of Mutants in the I-domain on Bacteriophage P22 Coat Protein Stability and Mature Capsid Structure*

Faculty Mentor: Dr. Carolyn Teschke, Department of Molecular and Cell Biology

**28. Leighanne Ormston, Psychology & Biological Sciences (2016)**

Project Title: *The Effect of Perceptual Fine-tuning on Facial Recognition in Infancy*

Faculty Mentor: Dr. Heather Bortfeld, Department of Psychology

**29. Alexandra Rudolph, Animal Science & Molecular and Cell Biology (2016)**

Project Title: *Effects of Bovine Granulocyte-macrophage Colony Stimulating Factor on Milk Neutrophil Apoptosis*

Faculty Mentor: Dr. Michael O'Neill, Department of Molecular and Cell Biology

**30. Brendan Smalec, Molecular and Cell Biology & Art History (2016)**

Project Title: *Looking Beyond the Genetic Code: Cracking the Epigenetic Changes Associated with Tumorigenesis and Metastasis in the White-Footed Mouse*

Faculty Mentor: Dr. Rachel O'Neill, Department of Molecular and Cell Biology

**31. Zachary Thatcher, Materials Science and Engineering (2017)**

Project Title: *Reliability Testing of Stepwise Switching in Multiferroics*

Faculty Mentor: Dr. Bryan Huey, Department of Materials Science and Engineering

**32. Ashley Trinh, Physiology and Neurobiology (2016)**

Project Title: *Unique Control of Vascular Tone in a Brainstem Respiratory Center*

Faculty Mentor: Dr. Daniel Mulkey, Department of Physiology and Neurobiology

**33. Casey Turovac, Speech, Language, and Hearing Sciences (2016)**

Project Title: *Infant Recognition of Mother vs. Stranger Sine Wave Speech*

Faculty Mentor: Dr. Heather Bortfeld, Department of Psychology

**34. Karen Vazquez, Physiology and Neurobiology (2017)**

Project Title: *Testing Whether KCNQ-channel Activators Overcome Dysfunction Due to Encephalopathy-associated KCNQ2 Mutations*

Faculty Mentor: Dr. Anastasios Tzingounis, Department of Physiology and Neurobiology

**35. Stephanie Vu, Physiology and Neurobiology (2016)**

Project Title: *Understanding the Dorsal and Ventral Hippocampal Subregions Using Single-unit Recording*

Faculty Mentor: Dr. Etan Markus, Department of Psychology