2014 Summer Undergraduate Research Fund (SURF) Awards

Congratulations to the fifty-nine UConn undergraduates offered SURF Awards for Summer 2014! 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.

1. **Briana Bardos, Political Science & Human Rights (2015)**
   Project Title: *How Social Entrepreneurship Affects Women’s Political and Economic Participation in Guatemala*
   Faculty Mentor: Dr. David Richards, Department of Political Science

2. **Emily Behling, Biological Sciences (2015)**
   Project Title: *Exploring species composition of plant diaspores found in the feathers of amphitropical migratory shorebirds*
   Faculty Mentor: Dr. Bernard Goffinet, Department of Ecology and Evolutionary Biology

3. **Nellie Binder, International Relations (2015)**
   Project Title: *Photographs that Changed History: The Majdanek Liberation Narrative*
   Faculty Mentor: Dr. Michael Orwicz, Department of Art and Art History

4. **Michael Bond, Molecular and Cell Biology (2016)**
   Project Title: *The effects of microtubule disruption on TNF-R1 membrane trafficking in drug arrest colon cancer cells*
   Faculty Mentor: Dr. Charles Giardina, Department of Molecular and Cell Biology

   Project Title: *Auditory Processing in the Brain and the Link to Reading Ability*
   Faculty Mentor: Dr. Erika Skoe, Department of Speech, Language, and Hearing Sciences

   Project Title: *Recording Remains: Reading the Book Format As Installation*
   Faculty Mentor: Dr. Ray DiCapua, Department of Art and Art History

7. **Michael Cantara, Engineering Physics (2016)**
   Project Title: *Formation of Ultracold Rb3 Molecules*
   Faculty Mentor: Dr. William Stwalley, Department of Physics

   Project Title: *Nanoscale property mapping of VO2 thin films for Energy Efficient 'Smart Windows'*
   Faculty Mentor: Dr. Bryan Huey, Department of Materials Science and Engineering

   Project Title: *Discovering an AMPK-UCP5 Link in Neuroprotective Effects in Dopaminergic Neurons Under Oxidative Stress*
   Faculty Mentor: Dr. Yih-Woei Fridell, Department of Allied Health Sciences
    Project Title: Differential Scanning Calorimetry Study on the Lipid Transfer between Lipid-Based Nanodiscs
    Faculty Mentor: Dr. Mu-Ping Nieh, Department of Chemical and Biomolecular Engineering

    Project Title: Investigating the evolutionary gain and loss of Na+, K+ - ATPase “isoform switching” in a euryhaline fish, the Alewife
    Faculty Mentor: Dr. Eric Schultz, Department of Ecology and Evolutionary Biology

12. Laura Dellalana, Biological Sciences (2015)
    Project Title: Characterization of Hist3H2a in Murine Retina
    Faculty Mentor: Dr. Rahul Kanadia, Department of Physiology and Neurobiology

    Project Title: Rational Antisense Design
    Faculty Mentor: Dr. Ranjan Srivastava, Department of Chemical and Biomolecular Engineering

    Project Title: Stimulation Coding for an Auditory Midbrain Implant
    Faculty Mentor: Dr. Monty Escabi, Department of Electrical and Computer Engineering

    Project Title: Colon Cancer Prevention and the Diet
    Faculty Mentor: Dr. Valerie Duffy, Departments of Allied Health Sciences and Nutritional Sciences

16. Sherif Eldirany, Chemistry (2016)
    Project Title: Exploring DNA-binding in the PRC1 SCML-2 Domain
    Faculty Mentor: Dr. Irina Bezsonova, Department of Molecular Biology and Biophysics, UConn Health Center

17. Emily Errante, Psychology (2015)
    Project Title: Analysis of Jaw Muscle Activity During Drug-Induced Oral Tremors: Possible Relation to Parkinsonian Symptoms
    Faculty Mentor: Dr. John Salamone, Department of Psychology

    Project Title: Allosteric Modulation of the Cannabinoid Receptor: A G Protein-Coupled Receptor
    Faculty Mentor: Dr. Debra Kendall, Department of Pharmaceutical Sciences

    Project Title: Investigation of the cardiolipin dependence of mitochondrial respiratory complex IV using nanoscale bilayers
    Faculty Mentor: Dr. Nathan Alder, Department of Molecular and Cell Biology

    Project Title: Oscillatory Activity in the Subthalamic Nucleus In A Pharmacological Rodent Model of Parkinsonian Tremor
    Faculty Mentor: Dr. John Salamone, Department of Psychology
   Project Title: The Middle Eocene Climatic Optimum: An analogue for future climate change in North America
   Faculty Mentor: Dr. Michael Hren, Department of Chemistry and Center for Integrative Geosciences

22. Jessica Hockla, Biomedical Engineering & Chemical Engineering (2015)
   Project Title: Investigating the spatial distribution of native potassium channels in the HeLa cell membrane and their interaction with tetraethylammonium via single-molecule force spectroscopy.
   Faculty Mentor: Dr. George Lykotrafitis, Departments of Mechanical and Biomedical Engineering

   Project Title: Squaraine Dyes as a Novel Labeling Technique for Cysteine in Polypeptides
   Faculty Mentor: Dr. Challa Kumar, Department of Chemistry

24. Kewa Jiang, Molecular and Cell Biology (2016)
   Project Title: Characterization of Novel Synthetic Vaccinia Virus Promoters
   Faculty Mentor: Dr. Paulo Verardi, Department of Pathobiology and Veterinary Science

   Project Title: The Process of Identifying as HIV Positive and its Health Outcomes
   Faculty Mentor: Dr. Lisa Eaton, Department of Human Development and Family Studies

   Project Title: Spatiotemporal Monitoring of Oxygen and Reactive Oxygen Species for Tissue Engineering Applications
   Faculty Mentor: Dr. Pinar Zorlutuna, Departments of Mechanical Engineering and Biomedical Engineering

27. Faye Koenigsmark, Environmental Engineering (2015)
   Project Title: Iron Oxide – Organic Matter Coprecipitates and Controls on Cu Availability
   Faculty Mentor: Dr. Timothy Vadas, Department of Civil and Environmental Engineering

   Project Title: Using Distance Sampling to Determine Impacts of Timber Harvest on Wood Frogs (Lithobates sylvaticus)
   Faculty Mentor: Dr. Tracy Rittenhouse, Department of Natural Resources and the Environment

29. Rubby Koomson, Nursing (2016)
   Project Title: Reminiscence Functions, Depressive Symptoms and Severity of Chronic Pain in Older Black Adults.
   Faculty Mentor: Dr. Juliette Shellman, School of Nursing

   Project Title: Characterizing the basis for in vitro and in vivo antioxidant activity of aronia berries
   Faculty Mentor: Dr. Bradley Bolling, Department of Nutritional Sciences

   Project Title: The Effects of Cytokines and Growth Factors on Muscle Satellite Cells from Foals
   Faculty Mentor: Dr. Sarah Reed, Department of Animal Science
   Project Title: Analysis of Muscle Stem Cell Programming
   Faculty Mentor: Dr. David Goldhamer, Department of Molecular and Cell Biology

   Project Title: The Role of RNA Transcripts in the Formation of Centromere Complexes in Drosophila
   Faculty Mentor: Dr. Barbara Mellone, Department of Molecular and Cell Biology

34. Richard Lin, Biomedical Engineering (2015)
   Project Title: Cortical Neuron Discriminations of Shape and Rhythm Temporal Cues in Sound Sequences
   Faculty Mentor: Dr. Heather Read, Department of Psychology

35. Natana Mann, Physiology and Neurobiology (2015)
   Project Title: Striatal morphology in a rat model of premature brain injury and associated attention deficit
   Faculty Mentor: Dr. R. Holly Fitch, Department of Psychology

36. Emily McInerney, Natural Resources (2015)
   Project Title: How do water table fluctuations affect greenhouse gas emissions from created wetlands?
   Faculty Mentor: Dr. Ashley Helton, Department of Natural Resources and the Environment

   Project Title: Can Different Procedures in the NICU with Varying Degrees of Stress on the Neonate be Organized into a “Stressor Scale”?
   Faculty Mentor: Dr. Xiaomei Cong, School of Nursing

   Project Title: Behavioral evaluation of a Dyx1c1 conditional knock-out mouse
   Faculty Mentor: Dr. R. Holly Fitch, Department of Psychology

39. Paige Orlofsky, Chemical Engineering & German Studies (2017)
   Project Title: Protist Information Cascades
   Faculty Mentor: Dr. Leslie Shor, Department of Chemical and Biomolecular Engineering

40. Giorgia Paiella, English (2016)
    Project Title: Love in the Time of Technology: Cinematic, Literary, and Philosophical Analysis of Gender, Humanity, Intimacy, and Selfhood in Spike Jonze’s Her
    Faculty Mentor: Dr. Sherry Zane, Women's, Gender, and Sexuality Studies

   Project Title: The lived experience of nurses providing quality health care to inmates of CT prisons
   Faculty Mentor: Dr. Deborah Shelton, School of Nursing

   Project Title: Consistency of Parent Report of Skills with Direct Observation in Children With Autism Spectrum Disorders
   Faculty Mentor: Dr. Deborah Fein, Department of Psychology
43. Nicole Piscopo, Biomedical Engineering (2015)*
   Project Title: Application of Acoustic Radiation Force to Biomaterials
   Faculty Mentor: Yusuf Khan, Department of Orthopaedic Surgery, UConn Health Center
   *award declined

44. Martina Powell, Women’s, Gender, and Sexuality Studies & American Studies (2015)
   Project Title: A Memory, A History, and A Haunting: Hip Hop in the American Imagination and Conscience
   Faculty Mentor: Dr. Heather Turcotte, Department of Political Science and Women’s, Gender, and Sexuality Studies

45. Kimberly Rebello, Chemistry (2015)
   Project Title: Synthesis of C8 and N2 Deoxyguanosine Adducts of 6-Nitrochrysene, A Cancer-Causing Agent
   Faculty Mentor: Dr. Ashis Basu, Department of Chemistry

46. Molly Rockett, Political Science (2015)
   Project Title: Expectations and Confidence: Assessing Trial Court Legitimacy in a Politicized Era
   Faculty Mentor: Dr. Virginia Hettinger, Department of Political Science

47. Peter Ruffino, Marine Sciences (2015)
   Project Title: Reconstructing Recent Black Carbon Inputs to the New River Estuary using Terrestrial Biomarkers
   Faculty Mentor: Dr. Craig Tobias, Department of Marine Sciences

   Project Title: Effects of talker familiarity on word recognition in adults with dyslexia
   Faculty Mentor: Dr. Rachel Theodore, Department of Speech, Language, and Hearing Sciences

49. Rebecca Smith, Nursing (2015)
   Project Title: Evaluation of Nursing Knowledge of Early Initiation of Breastfeeding in Preterm Infants in a Hospital Setting
   Faculty Mentor: Dr. Jacqueline McGrath, School of Nursing

50. Meaghan Sullivan, Nursing (2016)
   Project Title: The Relationship between Feeding Intolerance and Necrotizing Enterocolitis: A Retrospective Cohort Study with Low Birth Weight Preterm Infants
   Faculty Mentor: Dr. Katherine Gregory, Boston College School of Nursing, Brigham and Women’s Hospital Department of Neonatology
   UConn Mentor: Dr. Jacqueline McGrath, School of Nursing

   Project Title: Perceptual Learning in Adults with Dyslexia
   Faculty Mentor: Dr. Rachel Theodore, Department of Speech, Language, and Hearing Sciences

   Project Title: Problems on Efficient Coupling of Non-Symmetric Markov Chains
   Faculty Mentor: Dr. Iddo Ben-Ari, Department of Mathematics
   Project Title: Correlations Between Expressive Language and Mu Suppression in Early Childhood
   Faculty Mentor: Dr. Kimberly Cuevas, Department of Psychology

54. Sarah Warack, Pre-Pharmacy (2016)
   Project Title: Nanoparticle delivery of oxygenated perfluorocarbon as a method of tumor hypoxia reduction in mice bearing human lung cancer xenografts
   Faculty Mentor: Dr. Xiuling Lu, Department of Pharmaceutical Sciences

55. Samantha Wesoly, Molecular and Cell Biology (2015)
   Project Title: Early Intervention Rate and Autism Spectrum Severity Improvement
   Faculty Mentor: Dr. Deborah Fein, Department of Psychology

56. Victoria Wickenheisser, Physiology and Neurobiology (2016)
   Project Title: Circadian Rhythms and Cognitive Function in Rats
   Faculty Mentor: Dr. Etan Markus, Department of Psychology

57. Richard Wolferz, Jr., Biological Sciences (2015)
   Project Title: Lateral Ventricle Damage and Expansion due to Repetitive Mild Traumatic Brain Injury
   Faculty Mentor: Dr. Joanne Conover, Department of Physiology and Neurobiology

58. Deric Zhang, Physiology and Neurobiology (2015)
   Project Title: Discrimination of Temporal Cues in Rat Call Sequences
   Faculty Mentor: Dr. Heather Read, Department of Psychology

   Project Title: Changes in Early Spontaneous Neural Activity in Learning Disorder
   Faculty Mentor: Dr. Joseph LoTurco, Department of Physiology and Neurobiology