

# FRONTIERS

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IN UNDERGRADUATE RESEARCH

Seventeenth Annual  
Poster Exhibition

A CELEBRATION OF SCHOLARSHIP, INNOVATION,  
CREATIVITY, AND COLLABORATION

**April 11, 2014**

3:30 p.m. – 4:30 p.m.

**April 12, 2014**

11:30 a.m. – 2:00 p.m.

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**ENRICHMENT PROGRAMS**

OFFICE OF  
UNDERGRADUATE RESEARCH

Sponsored by  
The University of Connecticut

Office of Undergraduate Research  
Enrichment Programs  
Honors Program

## About Frontiers in Undergraduate Research

The Frontiers Poster Exhibition is a multidisciplinary research forum and the largest showcase of undergraduate research, scholarship, and creative projects at the University of Connecticut. Frontiers 2014 is the seventeenth annual Frontiers event sponsored by the Office of Undergraduate Research (OUR). This year's poster exhibition includes 225 students presenting posters for 209 research projects, with some students presenting on Friday or Saturday only.

The projects span the disciplines and include both independent research and work done in collaboration with other undergraduates as well as graduate student and faculty mentors. The presenters are among the top students at UConn and include Honors students, University Scholars, winners of OUR funding competitions, and winners and nominees of prestigious national scholarships. We hope you enjoy meeting our wonderful students and learning about their exciting work.

## About the Office of Undergraduate Research

The Office of Undergraduate Research (OUR) exists to encourage and support undergraduate research at the University of Connecticut. Our office provides information and resources to encourage all students to pursue undergraduate research, as well as several funding programs to support the students and their faculty mentors.

Many of the Frontiers presenters have received financial support for their projects from the OUR, which awarded approximately \$332,000 in 2012-2013 to students for their research and creative work over the summer and during the academic year. These awards are funded by the Office of Undergraduate Research with generous support from the Deans of the schools and colleges, the Provost's office, and private donations from many, many alumni, parents, and other friends of UConn and undergraduate research.

## Schedule of Events

Poster Exhibition	Friday, April 11, 2014 3:30 p.m. – 4:30 p.m.
	Saturday, April 12, 2014 11:30 a.m. – 2:00 p.m.
Student and Faculty Reception	Friday, April 11, 2014 4:30 p.m. – 5:30 p.m.

### **Musical Performance**

*Suite for Four Trumpets* by Jack Normain Kimmel  
UConn Trumpet Quartet  
Russel Allyn, David Dorfman,  
Meagan Ferreira, Lesley Knaack

### **Introduction and Welcome**

**Caroline McGuire**, Director, Office of Undergraduate  
Research

### **Keynote Speaker**

**Jeff Seemann**, Vice President for Research

### **Closing Remarks**

**Jennifer Lease Butts**, Assistant Vice Provost for  
Enrichment Programs and Director, Honors Program

### **Musical Performance**

*Solo Saxophone Improvisation*  
Colin Walters

# Poster Listing by School, College, or Program

This listing of projects includes the undergraduate student authors and their faculty mentors. Many projects also include the contributions and mentorship of dedicated graduate students and post-doctoral scholars. In some cases students work with faculty outside their school or college; in most cases, research is grouped according to the student's major.

Please note that an "F" after the poster number signifies a presentation on Friday only and an "S" after the poster number signifies a presentation on Saturday only.

## School of Fine Arts

### **1. Jack Normain Kimmel's "Suite for Four Trumpets": Preparation, Interpretation, and Enhancement**

Russel Allyn, Music

Meagan Ferreira, Music

David Dorfman, Music

Lesley Knaack, Music

Advisor: Louis Hanzlik, Associate Professor, Music

### **2. Creating a Manuscript Capturing Synesthetic Perception**

Kaitrin Acuna, Art – Photography

Advisor: Emily Myers, Assistant Professor, Speech, Language, and Hearing Sciences

### **3F. The 2014 Mid-Atlantic Collegiate Jazz Orchestra**

Colin Walters, Music Education and Jazz Studies

Advisor: Earl MacDonald, Professor, Music

### **3S. Performance Spaces in Copenhagen: The Playhouse and the Opera House**

Kari Swenson, Music and Art History

Advisor: Jean Givens, Professor, Art History

**4F. On the Perception of Early Atonal Music: Finding Musical Meaning in the Work of Anton von Webern**

Jonathan Schmieding, Music Composition and Performance

Advisor: Kenneth Fuchs, Professor, Music

**4S. Grandfather**

Jamie Girolamo, Fine Arts

Advisor: Janet Pritchard, Associate Professor, Art and Art History

**5. Hatshepsut & Carter: The Process of Utilizing History to Inform Drama**

Harrison Haney, Acting and Puppet Arts

Advisor: Michael Bradford, Associate Professor, Dramatic Arts

**6. 2014 USITT Young Designer's Forum Exhibit**

Matthew Iacozza, Theatre Design/Technology

Advisor: Laura Crow, Professor, Dramatic Arts

**7. Scenic Design for "Dead Heavy Fantastic"**

Brenna Sellars, Theatre Design/Technology

Advisor: Daniela Weiser, Assistant Professor in Residence, Dramatic Arts

**School of Nursing**

**8. Provision of Emotional Support to Increase Pumping Duration in High Risk Mothers**

Rebecca Paquette, Nursing

Advisor: Jacqueline McGrath, Professor and Associate Dean, Nursing

**9F. Analysis of 2010 National Ambulatory Medical Care Survey for Infant Nutritional Status/Weight**

Nikaela LaRossa, Nursing

Advisor: Deborah McDonald, Associate Professor, Nursing

**9S. Women's Experiences of Home Birth: Unmedicated and Untethered**

Hayley Dunnack, Nursing

Advisor: Cheryl Beck, Distinguished Professor, Nursing

**10. An Exploratory Pilot of Factors Associated with Premenstrual Syndrome in Minority Women**

Mallory Perry, Nursing

Advisor: Michelle Judge, Assistant Professor, Nursing

Advisor: Deborah McDonald, Associate Professor, Nursing

**11F. Exploring the Influence of Paternal Race/Ethnicity, Education Level, and Child Gender on Paternal Feeding Style**

Rebecca Albanese, Nutritional Sciences and Spanish

Advisor: Amy Mobley, Assistant Professor, Nutritional Sciences

**11S. The Association of Depressive Symptoms and Pain Management Trajectory**

Caroline Barri, Nursing

Advisor: Deborah McDonald, Associate Professor, Nursing

**UConn IDEA Grant Recipients**

**12. Stress Management and Well-Being**

Makayla Davis, Psychology

Advisor: Crystal Park, Professor, Psychology

Advisor: Elizabeth Cracco, Director, Counseling and Mental Health Services

**13. Measuring the Sustainability and Long-Term Benefits of Micro-Finance Programs**

Natalia Svirshchevsky, Finance

Advisor: Susan Spiggle, Associate Professor and Acting Department Head, Marketing

**14. Systemic Inquiry Into the Potential of iPad For Teaching and Learning**

Jake Sippel, Individualized Major: Academic Technologies

Advisor: Jae-Eun Joo, Associate Professor, Educational Psychology

**15. Mode, Method, and Medium: The Affordances of the Online Writing Tutorial in the Writing Center Service**

Erik Holtz, Individualized Major: Social Interaction and New Media

Advisor: Tom Deans, Associate Professor, English

**16. Virtual Hartford: Interacting with Hartford's Past Through the Digital Humanities**

Ryan Allen, History

Advisor: Micki McElya, Associate Professor, History

**17. The Search for the White Rose**

Peter Logue, English

Advisor: Oliver Hiob, Assistant Professor in Residence, German Studies and Comparative Literature and Cultural Studies, Tufts University

Advisor: Sebastian Wogenstein, Professor, Literatures, Cultures and Languages

**18. Recording Remains: Exploring the Page Format Through Installation Art**

Antonio Campelli, Art – Painting and Installation

Advisor: Ray DiCapua, Associate Professor, Art and Art History

**19. Babelation Dramaturgy**

Anna Woodruff, Theatre Studies

Advisor: Michael Bradford, Associate Professor, Dramatic Arts

**20. Chemicals and Commodities from Waste Coffee: Analysis of Fast Pyrolysis Product with Respect to Experimental Design**

Ari Fischer, Chemical Engineering

Advisor: George Bollas, Assistant Professor, Chemical and Biomolecular Engineering

**21. Do Visitors Affect Zebra Behavior in Zoos?**

Christine Conte, Biological Sciences

Advisor: Chris Elphick, Associate Professor, Ecology and Evolutionary Biology

**22. Visualizing Distant Suffering**

David Pereira, Art – Communication Design

Advisor: Cathy Schlund-Vials, Associate Professor, English, and Director, Asian American Studies Institute

**College of Liberal Arts and Sciences**

**23. Empire of Slavery: The 1926 Slavery Convention**

Robert Anderson, Individualized Major: International Development and Human Rights

Advisor: Cathy Schlund-Vials, Associate Professor, English, and Director, Asian American Studies Institute

**24. The Sea Scavengers: Adapting New London's Nineteenth Century Whale Fishery in its Final Years**

Rebecca D'Angelo, Anthropology and History

Advisor: Christopher Clark, Professor and Acting Department Head, History

**25. Local Schools, Rural Communities: Consolidation and Community in Central Vermont**

Luke LaRosa, Urban and Community Studies

Advisor: Carol Atkinson-Palombo, Assistant Professor, Geography



**26. Sedimentation Behind Conway Electric Dam, South River, Western Massachusetts**

Samantha Dow, Geoscience and Geography

Advisor: William Ouimet, Assistant Professor, Geography and the Center for Integrative Geosciences

**27F. Assessing “Mixed-Use” - Evaluating New Urbanism in New England**

Michael Daniels, Political Science and Economics

Advisor: Dennis Heffley, Professor, Economics

Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor and POLS Honors Director, Political Science

**27S. Casino Culture: The Connecticut Model of Casino and Tribal Relations**

John Conway, Political Science

Advisor: Ronald Schurin, Associate Professor in Residence, Political Science

**28. Exploring the Role of Environmental Soft Laws: A Comparative Study of Human Rights Conditions during Coal and Uranium Mining on the Navajo Nation**

Mary Mackie, Political Science and Human Rights

Advisor: Mark Boyer, Distinguished Professor, Political Science

Advisor: Barbara Gurr, Assistant Professor, Women's, Gender and Sexuality Studies

Advisor: Nancy Shoemaker, Professor, History

**29F. Climate Change Vulnerabilities: Case Studies of the Maldives and Kenya**

Katherine Peinhardt, Individualized Major: International Relations and Spanish

Advisor: Mark Boyer, Distinguished Professor, Political Science

Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor and POLS Honors Director, Political Science

**29S. The Specter of Intolerance: Understanding Religious Violence in Pakistan**

Syeda Haider, Political Science and Anthropology

Advisor: Betty Hanson, Professor Emerita, Political Science

**30. Beyond Nation States: The Role and Activity of NGOs in International Environmental Governance**

Marissa Piccolo, Political Science and Economics

Advisor: Prakash Kashwan, Assistant Professor, Political Science

### **31. Public Perception and Judicial Legitimacy**

Mary (Molly) Rockett, Political Science

Advisor: Virginia Hettinger, Associate Professor, Political Science

### **32. When the Courts Make History: The Impact of the Inter American Court on Latin American Conflict Zones**

Jack Zachary, Political Science and Human Rights

Advisor: Luis Van Isschot, Assistant Professor, History

### **33. Gun Control: Current Polls Don't Tell the Full Story**

Brian Tiedt, Political Science and Economics

Advisor: Paul Herrnson, Professor, Political Science and Director, Roper Center

### **34F. Candidate Emergence in Congressional Elections: Impact of Gender**

Katie Cavanaugh, Political Science

Advisor: Paul Herrnson, Professor, Political Science and Director, Roper Center

### **34S. Pressure to Democratize? An Assessment of U.S. Policy Towards Post Arab-Spring Egypt**

Emilie Meguid, Political Science and Linguistics/Psychology

Advisor: Jeremy Pressman, Associate Professor, Political Science

### **35F. Candidate Emergence in Congressional Elections: Impact of Political Experience**

Emma Wager, Political Science and Economics

Advisor: Paul Herrnson, Professor, Political Science and Director, Roper Center

### **35S. From Inclusion to Empowerment: The Political Implications of Microfinance**

Kateri Ciccaglione, Political Science and Economics

Advisor: Oksan Bayulgen, Associate Professor, Political Science

### **36F. The Impact of Race on Congressional Candidacies**

Joshua Thomas, Political Science

Advisor: Paul Herrnson, Professor, Political Science and Director, Roper Center

### **36S. Divergent Paths: Family Planning in Pakistan and Bangladesh**

S'ha Siddiqi, Political Science, Economics and French

Advisor: Betty Hanson, Professor Emerita, Political Science

Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor and POLS Honors Director, Political Science

**37. A Look Into the Issues Surrounding Proper Maternal Health Care in Bangladesh**

Asahi Hoque, Molecular and Cell Biology and Human Rights

Advisor: Manisha Desai, Associate Professor, Sociology

**38F. The Business of Poverty Alleviation: The Transition from Non-Profit to For-Profit Microfinance in Guatemala**

Katherine Walker, Political Science and Economics

Advisor: Oksan Bayulgen, Associate Professor, Political Science

**38S. Globalization and Vulnerability: Explaining the Irish Economic Miracle and its Collapse**

Kaitlin Alper, Political Science and English

Advisor: Mark Boyer, Distinguished Professor, Political Science

**39. Agroecological Alternatives to Sustainability: Examples from India, South Africa, and Brazil**

Elise Ursin, Individualized Major: International Relations and Human Rights

Advisor: Manisha Desai, Associate Professor, Sociology

**40F. Sprechen Sie Englisch? How English-German Bilingualism is Reshaping German National Identity**

Robyn Caron, Individualized Major: International Relations

Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor and POLS Honors Director, Political Science

**40S. The Legal Inability to Say “No”: A Cross-national Statistical Analysis of Factors Contributing to the Adoption of Marital Rape Laws**

Celia Guillard, Individualized Major: International Relations and Political Science

Advisor: David Richards, Professor, Political Science

**41F. Seventeen Years Later: Addressing the Gap Between De Jure and De Facto Access to the Right to Adequate Housing in the New South Africa**

Sarah Wylie, Political Science and Human Rights

Advisor: Shareen Hertel, Associate Professor, Political Science

**42F. Unwarranted Criticisms: Examining the Legacy of James Buchanan**

Joseph Boccia, Political Science and History

Advisor: Ronald Schurin, Associate Professor in Residence, Political Science

**43F. Dodge, Duck, Elude, and Eschew: Fluctuations in American Public Opinion Regarding Intervention in Darfur, Libya, and Syria**

Ashley Palma, Political Science and Individualized Major: Cultural Foundations for 21<sup>st</sup> Century Diplomacy

Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor and POLS Honors Director, Political Science

**43S. Beverage Choice of Pregnant, Lactating, and Non-Pregnant Women**

Indhira Núñez, Biological Sciences

Advisor: Lawrence Armstrong, Professor, Kinesiology

**44F. The Continued Colonization of Africa: A Case Study of Nigeria**

Adanna Uwazurike, Political Science and Economics

Advisor: Heather Turcotte, Assistant Professor, Political Science

**44S. Comparison of the Observed Exercise and Nutrition Habits of Pregnant Women to Current Evidence-based Recommendations**

Kelly Fuller, Exercise Science

Advisor: Lawrence Armstrong, Professor, Kinesiology

Advisor: Carl Maresh, Distinguished Professor, Kinesiology

**45. A Review of State Custody and Shared Parenting Laws and their Influences on Fathering**

Shannon Perkins, Human Development and Family Studies and English

Advisor: Kari Adamsons, Assistant Professor, Human Development and Family Studies

**46. An Examination of the Dynamic Changes in US Health Prompted by Income Inequality**

Shavonda Brandon, Economics

Advisor: Dennis Heffley, Professor, Economics

**47F. Effectiveness of Co-Pays in the Correctional Health Setting**

Andrew Glick, Individualized Major: Multidisciplinary Approaches to Healthcare

Advisor: Megan Ehret, Associate Professor, Pharmacy Practice

Advisor: Deborah Shelton, Professor, Nursing

**47S. Observing the Economic Effects of Direct-to-Consumer Advertising on Drug Spending**

Meiling Kry, Economics

Advisor: Dennis Heffley, Professor, Economics

**48. Care Coordination and Physician Incentives in a Fee-for-Service Health Care System**

John Giardina, Economics and Biological Sciences

Advisor: Dennis Heffley, Professor, Economics

**49F. Adherence to HAART: An Individual Patient Data Meta-Analysis**

Dylan Yaworski, Statistics

Advisor: Tania Huedo-Medina, Assistant Professor, Allied Health Sciences

**49S. How to Play Unfair Games: A Martingale Approach**

Zhe (Rachel) Li, Statistics

Advisor: Vladimir Pozdnyakov, Associate Professor, Statistics

**50. Flawed Statistical Analysis: Exploring Statistical Errors Within A Causal Inference Framework**

Victoria Chen, Statistics and Cognitive Science

Advisor: Ofer Harel, Associate Professor, Statistics

**51F. Nonverbal IQ Test Performance in Bilingual Children with Primary Language Impairment**

Kiyomi Andrada, Speech, Language, and Hearing Sciences and Spanish

Advisor: Tammie Spaulding, Assistant Professor, Speech, Language, and Hearing Sciences

**51S. Parents' School-Related Attitudes and Involvement at their Children's School**

Cindy Newman, Human Development and Family Studies and Psychology

Advisor: Annamaria Csizmadia, Assistant Professor, Human Development and Family Studies

**52. Investigating the Use of the Shape Bias for Word Learning in Children with Autism Spectrum Disorders**

Emily Potrzeba, Speech, Language, and Hearing Sciences and Psychology

Advisor: Letitia Naigles, Professor, Psychology

**Neag School of Education**

**53. Evaluation of Gifted Education Using A-F School Grading Accountability Systems**

Daniel Arndt, Secondary Biology Education

Advisor: Jonathan Plucker, Professor, Educational Leadership

**54. Skin Temperature Responses Following a Warm-Weather Road Race**

Luke Belval, Athletic Training

Advisor: Douglas Casa, Professor, Kinesiology

**College of Liberal Arts and Sciences**

**55. Contextual Influences on Speech Perception in Developmental Populations**

MaryKate Bisailon, Speech, Language, and Hearing Sciences

Devin Roscillo, Graduate, Speech, Language, and Hearing Sciences, Dec 2013

Advisor: Rachel Theodore, Assistant Professor, Speech, Language, and Hearing Sciences

**56. Developing Narrative Structure In A New Sign Language In Nicaragua: An Episode Analysis**

Eli Miranda, Speech, Language and Hearing Sciences

Advisor: Marie Coppola, Assistant Professor, Psychology and Linguistics

**57F. Modes of Communication among Deaf and Hard-of-Hearing Individuals in an Advancing Technological Age**

Rose Hart, Speech, Language, and Hearing Sciences

Advisor: Kathleen Cienkowski, Associate Professor and Acting Department Head, Speech, Language, and Hearing Sciences

**57S. The Impact of Bisensory Impairment on the Hearing Aid Effect in Older Adults**

Torri Ann Woodruff, Speech, Language and Hearing Sciences and Psychology

Brooke Cohen, Speech, Language and Hearing Sciences

Advisor: Kathleen Cienkowski, Associate Professor and Acting Department Head, Speech, Language and Hearing Sciences

**58. Pitch Variation Cues for Word Segmentation: A Comparison of Tonal and Non-Tonal Language Speakers**

Brittany Ciullo, Linguistics and Psychology

Advisor: Emily Myers, Assistant Professor, Psychology; Speech, Language, and Hearing Sciences

**59. Gap Detection and Frequency Discrimination Abilities in Individuals High in Autism Spectrum Disorder Symptomatology**

Emily Thompson, Speech, Language, and Hearing Sciences and Psychology

Advisor: Inge-Marie Eigsti, Professor, Psychology

**60F. Socioeconomic Correlates of Stress, Coping, and Health Behaviors in College Students**

Angelina Hernandez, Psychology

Advisor: Crystal Park, Professor, Psychology

**60S. Testing the Limits: College Students' Attitudes Toward Asian-White, Hispanic-White, and Black-White Interracial Relationships**

Andrea Lopez Salazar, Human Development and Family Studies

Advisor: Annamaria Csizmadia, Assistant Professor, Human Development and Family Studies

**61. Cognitive and Behavioral Predictors of Stress, Coping, & Behavior Change in First-Year Students**

Megan Iacocca, Psychology

Advisor: Crystal Park, Professor, Psychology

**62. Trauma, Help-Seeking Behavior, and Posttraumatic Growth in a College Sample**

Aaron Burrick, Human Development and Family Studies and Psychology

Advisor: Rachel Tambling, Assistant Professor, Human Development and Family Studies

**63. Applying the Health Belief Model to Individual's Beliefs and Preferences About Premarital Counseling**

Shelby Borowski, Human Development and Family Studies and Psychology

Advisor: Rachel Tambling, Assistant Professor, Human Development and Family Studies

**64. Social Correlates of Physical Activity Among College-Aged Women: A Cross Sectional Study**

Deidre Mitchell, Human Development and Family Studies

Advisor: Idethia Harvey, Assistant Professor, Human Development and Family Studies

**65F. The Effects of Internalizing Symptoms on Self-Focus in Adolescent Friendships**

Erica Hollar, Psychology

Advisor: Rhiannon Smith, Assistant Professor, Psychology

**65S. Effects of Body Posture on Perceived Personality Traits**

Babitha Thatiparthi, Psychology

Sabryne Videal, Psychology

Advisor: Steven Mellor, Associate Professor, Psychology

**66F. Co-Worry in Friendship Dyads**

Michelle Goldstein, Psychology

Advisor: Kimberli Treadwell, Associate Professor, Psychology

**67. Postmemory and Parábasis: Working For and Against the Concept of Nation in Latino and Albanian Literature (Junot Díaz and Fatos Kongoli)**

Krisela Karaja, English and Spanish Literature

Advisor: Guillermo Irizarry, Associate Professor, Literatures, Cultures, and Languages

Advisor: Cathy Schlund-Vials, Associate Professor, English and Director, Asian American Studies Institute

**68F. Literature of Generation X: Socioeconomic Constructions and Performances of Masculinity**

John Wilkinson, English and Economics

Advisor: Cathy Schlund-Vials, Associate Professor, English, and Director, Asian American Studies Institute

Advisor: Christopher Vials, Assistant Professor, English

Advisor: Alanson Minkler, Associate Professor, Economics

**68S. OUR Short Story**

Julie Bartoli, English and Journalism

Advisor: Susanne Davis, Professor, English

**69. The Construction and Deconstruction of Masculinity in the Life and Works of Ernest Hemingway**

Mariel Smith, English

Advisor: Veronica Makowsky, Professor, English

Advisor: Margaret Higonnet, Professor, English

Advisor: Margaret Breen, Professor, English

**70. The Public Versus Private Dichotomy of Gender Roles in Buenos Aires**

Arielle Yoon, Anthropology

Advisor: Françoise Dussart, Professor, Anthropology



### **71. Hartford's Caribbean Immigrants**

Chelsea Pajardo, Psychology and History

Advisor: Fiona Vernal-Wright, Associate Professor, History

### **72. Highly Active and Selective Catalytic Systems for Biomass and Photocatalytic Conversion**

Anton Gudz, Chemistry and Spanish

Advisor: Steven Suib, Distinguished Professor, Chemistry, and Director, Materials Science Institute

### **73F. Comparison of Rates of Azo Dye Degradation Using Novel Methods**

Shilpa Kolli, Environmental Science

Advisor: Steven Suib, Distinguished Professor, Chemistry and Director, Materials Science Institute

### **73S. Synthesis of Cerium Oxide Derivatives for the Water Gas Shift Reaction**

Kimija Zafar, Physiology and Neurobiology

Advisor: Steven Suib, Distinguished Professor, Chemistry, and Director, Materials Science Institute

Advisor: David Kriz, Graduate Student, Chemistry

### **74. C-F Bond Functionalization: An Unusual Reaction of alpha-silyl-substituted organometallics and alpha-fluoroketones**

Robin Cywar, Chemistry

Advisor: Nicholas Leadbeater, Associate Professor, Chemistry

### **75. Oxidative Functionalization of Activated C-H Bonds**

Rebecca Wiles, Chemistry

Advisor: Nicholas Leadbeater, Associate Professor, Chemistry

### **76. Translesional Synthesis DNA Polymerases**

Maciej Kosakowski, Biological Sciences and Chemistry

Advisor: Ashis Basu, Professor, Chemistry

### **77. Mutagenesis of 8-Oxoguanine Adjacent to an Abasic Site in Escherichia coli Cells Proficient or Deficient in DNA Polymerase IV**

Savas Tsikis, Molecular and Cell Biology

Advisor: Ashis Basu, Professor, Chemistry

### **78F. 3D Representation of Oral Mucositis**

Angelica Messina, Biological Sciences

Advisor: Perry Harovas, Associate Professor, Digital Media and Design

Advisor: Daniel Pejril, Assistant Professor, Digital Media and Design

Advisor: Douglas Peterson, Professor, School of Dental Medicine, UCHC

### **78S. Synthesis of Sulfatides for Type II Natural Killer T-Cells Activation**

Faith Crittenden, Chemistry

Advisor: Amy Howell, Professor and Department Head, Chemistry

### **79. The Magnetocaloric Effect and Magnetic Refrigeration**

Lukasz Kuna, Applied Physics

Advisor: Menka Jain, Associate Professor, Physics

### **80. Comparative Study of Classical and Quantum Scattering**

Joshua Squires, Physics and Applied Mathematics

Advisor: Vasili Kharchenko, Professor, Physics

### **81. Optimization of Bacteriorhodopsin Mutants by Charged Lipid Reconstitution**

Edward Courchaine, Structural Biology/Biophysics

Advisor: Robert Birge, Professor, Chemistry

### **82. Conformational Analysis of 2,2-Diaryl-1,3-dioxanes**

Sherif Eldirany, Chemistry

Advisor: William Bailey, Professor, Chemistry

### **83S. An Investigation of Biodiesel Stability: A Study of the Behavior of Antioxidants in Soybean and Canola Derived Biodiesel**

Casey Camire, Chemistry

Advisor: James Stuart, Professor Emeritus, Chemistry

## **College of Agriculture and Natural Resources**

### **83F. Parturition Insulin Resistance in Dairy Cows Alters Offspring Birth Weight and Insulin Responsiveness**

Bethany Sullivan, Animal Science and Pathobiology

Advisor: Sarah Reed, Assistant Professor, Animal Science

**84. Effects of Maternal 25-hydroxycholecalciferol (25OHD3) Supplementation on Fetal Bone Development in Pigs**

Katelyn McFadden, Animal Science

J.D. Coffey, E.A. Hines, C.W. Starkey – Texas Tech University

Advisor: Kristen Govoni, Assistant Professor, Animal Science

**85. Willingness to Pay for Farm, Forest, and Open Space Conservation Tax Incentives in CT Towns**

Emily Bergan, Resource Economics

Advisor: Stephen Swallow, Professor, Agricultural and Resource Economics

**86. The Accumulation of Phosphorus in Soil under Managed Turfgrass**

Andrew Brown, Environmental Science and Soil Science

Advisor: Thomas Morris, Professor, Plant Science and Landscape Architecture

Advisor: Karl Guillard, Professor, Plant Science and Landscape Architecture

**87F. Validation of Ultrasound as a Viable Technology for the Detection of Mastitis in Dairy Cattle**

Elizabeth Alexander, Pathobiology

Advisor: Sheila Andrew, Professor, Animal Science

Advisor: John Riesen, Professor Emeritus, Animal Science

**87S. The Application of ELISA in Vaccine Research**

Alyssa McDonagh, Pathobiology

Advisor: Antonio Garmendia, Professor, Pathobiology and Veterinary Science

**88. The Search for *Chlamydia* in Crohn's Disease**

Karen Chen, Pathobiology

Advisor: Herbert Van Kruiningen, Professor Emeritus, Pathobiology

Advisor: Antonio Garmendia, Professor, Pathobiology

**89. Studies of *Clostridium Perfringens***

Elizabeth Houston, Pathobiology

Advisor: Joan Smyth, Professor, Pathobiology

**90. Capturing Recombinant Vaccinia Viruses with Magnetic-Beaded Antibodies**

Peter Larson, Pathobiology

Advisor: Paulo Verardi, Assistant Professor, Pathobiology and Veterinary Science

## School of Engineering

### **91. Remote Monitoring of a Vertical Farming System**

David Knowles, Mechanical Engineering

Advisor: Richard Fu, UConn-TIP, Engineering

### **92. Production of Advanced TBC Using Amastan's UniMelt™ Process**

Nicholas Fleming, Chemical Engineering

Advisors: Kamal Hadidi and Mak Redjdal, Amastan (UConn-TIP)

### **93. Chondrogenic Differentiation of Normal and Mutant iPSC's**

Renee Wasko, Molecular and Cell Biology

Advisor: Caroline Dealy, Associate Professor, Department of Reconstructive Sciences, UCHC, and Director, UConn-TIP Bioscience & STEM Summer Research Intern Program

### **94. Transcatheter Aortic Heart Valves**

Jaclyn Mazzarella, Biological Sciences

Advisor: Wei Sun, Associate Professor, Mechanical Engineering, Biomedical Engineering

### **95. Pre-Operative Planning for Transcatheter Aortic Valve Replacement**

Rebecca Newman, Biomedical Engineering

Advisor: Wei Sun, Associate Professor, Mechanical Engineering, Biomedical Engineering

### **96. Redesigning and Incorporating the EpiPen into a Smartphone Case**

Kayvon Ghoreshi, Molecular and Cell Biology

Advisor: Donald Peterson, Associate Professor, Medicine, UCHC

### **97. Optimization of the Esterification of Levulinic Acid for Industrial Biorefinery Application**

Meghan Negus, Chemical Engineering

Advisor: Nicholas Leadbeater, Associate Professor, Chemistry

Advisor: Richard Parnas, Professor, Chemical and Biomolecular Engineering

Advisor: Yi Li, Professor, Plant Sciences

### **98. Functionalization of Activated Carbon**

Elaine Karl, Chemistry and Biological Sciences

Advisor: Timothy Vadas, Assistant Professor, Civil and Environmental Engineering

- 99. Biodegradation of Pharmaceuticals & Biosorption of Metals in Streams**  
Greg Rosshirt, Environmental Engineering  
Advisor: Timothy Vadas, Assistant Professor, Civil and Environmental Engineering
- 100F. Iron Oxide-Organic Matter Coprecipitates and Controls on Cu Availability**  
Faye Koenigsmark, Environmental Engineering  
Advisor: Timothy Vadas, Assistant Professor, Civil and Environmental Engineering
- 100S. Monte Carlo Simulation with R: An Application on Effect Size Estimations**  
Thomas Lee, Computer Science & Engineering  
Advisor: Tania Huedo-Medina, Assistant Professor, Statistics
- 101. The D-Term of Exploding Q-Balls**  
Michael Cantara, Engineering Physics  
Advisor: Peter Schweitzer, Associate Professor, Physics
- 102. Atomic Escape Fluxes Induced by Precipitation of ENAs Into Exoplanetary Atmospheres**  
Daniel Violette, Engineering Physics and Mathematics  
Advisor: Vasili Kharchenko, Professor, Department of Physics
- 103. Hybrid Go-Kart: High-Current Power Electronics Design**  
Joshua Calkins, Electrical Engineering  
Advisor: Sung-Yeul Park, Assistant Professor, Electrical and Computer Engineering
- 104. Cycloconverter**  
Nathan Butterfield, Electrical Engineering  
Advisor: Sung-Yeul Park, Professor, Electrical Engineering
- 105. Dual-Output AC and DC Power Converter for Solar Photovoltaic Energy Conversion**  
Julio Yela, Electrical Engineering  
Advisor: Ali Bazzi, Assistant Professor, Electrical and Computer Engineering

**106. GreenScreen: Software to Improve Campus Water and Energy Use**

Andrew Silva, Chemical Engineering

Advisor: Jeffrey McCutcheon, Assistant Professor, Chemical and Biomolecular Engineering

Advisor: Douglas Cooper, Professor and Department Head, Chemical and Biomolecular Engineering

Advisor: Jeffrey Meunier, Lecturer, Computer Science and Engineering

**107. Development and Optimization of a Microfluidic Flow Cell for Spatially Selective Growth of a Bacterial Biofilm**

Virginia Cousens, Chemical Engineering

Advisor: Leslie Shor, Assistant Professor, Chemical and Biomolecular Engineering

**108. Resistance-drift Characterization of Lateral Nanoscale Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub> Cells**

Zoila Jurado, Mechanical Engineering

Lindsay Sullivan, Electrical Engineering

Advisor: Ali Gokirmak, Associate Professor, Electrical Engineering

Advisor: Helena Silva, Associate Professor, Electrical Engineering

**College of Liberal Arts and Sciences**

**109F. Investigation of the Lipid Dependence Of Respiratory Complex IV Activation Using Nanoscale Bilayers**

Matthew Greenwood, Physiology and Neurobiology and Molecular and Cell Biology

Advisor: Nathan Alder, Assistant Professor, Molecular and Cell Biology

**109S. Relationships Between Two Northeastern Bats, *Myotis lucifugus* and *Eptesicus fuscus*, and Landscape Structure**

Ekaterina Morozova, Ecology and Evolutionary Biology

Advisor: Michael Willig, Director and Professor, Center for Environmental Sciences and Engineering

**110F. Species Identification of Oomycete Infections in New England Salamander Eggs**

Alexis Cordone, Religion and Biological Sciences

Advisor: Mark Urban, Assistant Professor, Ecology and Evolutionary Biology

Advisor: Louise Lewis, Associate Professor, Ecology and Evolutionary Biology

**110S. Centipedes of Connecticut: New Faunal Records**

Joseph DeSisto, Ecology and Evolutionary Biology

Advisor: Jane O'Donnell, Invertebrate Collections Manager, Ecology and Evolutionary Biology

**111. Purification and Optimization of a Nanoparticle Malaria Vaccine**

Alex Ward, Biological Sciences

Advisor: Peter Burkhard, Professor, Molecular and Cell Biology

**112. Vibrio Immunoglobulin-like Protein and Its Role Host Symbiosis**

Joseph Raymond, Molecular and Cell Biology

Advisor: Spencer Nyholm, Associate Professor, Molecular and Cell Biology

**113. Characterization of a Putative Cephalotoxin in Euprymna scolopes Hemocytes**

Jessie Scott, Biological Sciences

Advisor: Spencer Nyholm, Associate Professor, Molecular and Cell Biology

**114. Icosahedral Virus Capsid Assembly: Investigations of Size Determination in the P22 Coat Protein**

Aashay Vyas, Molecular and Cell Biology

Advisor: Carolyn Teschke, Professor, Molecular and Cell Biology

**115. Epigenetic Regulation of Grin2b Expression**

Richika Makol, Physiology and Neurobiology and Psychology

Advisor: Joseph LoTurco, Professor, Physiology and Neurobiology

**116. Investigations in Tissue Clearing: A Review of Modern Methods**

Joel Rosiene, Physiology and Neurobiology

Advisor: Joseph LoTurco, Professor, Physiology and Neurobiology

**117. The Role of Dyslexia-Associated Gene Dcdc2 in Pre-NMDAR regulation in Thalamocortical Pathways**

Takumi Otsuka, Biomedical Engineering

Advisor: Joseph LoTurco, Professor, Physiology and Neurobiology

**College of Agriculture and Natural Resources**

**118. The Effects of Nectar Robbing in Colombia**

Briana Lechkun, Natural Resources

Advisor: Margaret Rubega, Professor, Ecology & Evolutionary Biology

**119. The Impact of the African Lion on the Black-backed Jackal**

Jenna Blessington, Natural Resources and the Environment

Advisor: Morty Ortega, Associate Professor, Natural Resources and the Environment

**120. Survival and Movements of Post-Fledging American Kestrels Hatched from Nest Boxes**

Annie Stupik, Natural Resources and the Environment

Advisor: Chadwick Rittenhouse, Assistant Research Professor, Natural Resources and the Environment

**121F. Enhancing Sweetness and Palatability of Aronia Juice via Added Sugars and Olfactory Flavoring**

Jeeha Park, Molecular and Cell Biology

Advisor: Valerie Duffy, Professor, Allied Health Sciences

**122. Molecular Interactions and Change in Antioxidant Activity in Aronia Juice**

Sarah Kranz, Dietetics

Advisor: Bradley Bolling, Assistant Professor, Nutritional Sciences

**College of Liberal Arts and Sciences**

**123. The Role of Endogenous Retroviruses in the Evolution of Fish Placentas**

Eli Pasackow, Molecular and Cell Biology

Advisor: Michael O'Neill, Associate Professor, Molecular and Cell Biology

**124. In Vitro RNAi Knockdown of the Meiosis Specific Protein, Xlr3 (X-Linked Lymphocyte-Regulated 3)**

Katelyn DeNegre, Physiology and Neurobiology

Advisor: Michael O'Neill, Associate Professor, Molecular and Cellular Biology

**125. Histone-3 Methylation Patterns in the Xlr3b Locus in Mus Musculus**

Anita Reddy, Molecular and Cell Biology

Advisor: Michael O'Neill, Associate Professor, Molecular and Cell Biology

**126. Immunocytochemical Analysis of the Genetic Deletion of the Alpha-4 Subunit of GABA(A) Receptors**

Sean Dinallo, Physiology and Neurobiology

Advisor: Angel de Blas, Professor, Physiology and Neurobiology



**127. The Effects of Overexpression of Neuroligin and Collybistin in Rat Cortical Neurons by In Utero Electroporation**

Christopher Fekete, Physiology and Neurobiology

Advisor: Angel de Blas, Professor, Physiology and Neurobiology

**128. A Persistent Role for EphA4 in Adult Neurogenesis**

Nicholas Gallo, Physiology and Neurobiology

Advisor: Joanne Conover, Associate Professor, Physiology and Neurobiology

**129. Age Related Ventriculomegaly and Associated Lateral Wall Gliosis**

Ye Sun, Molecular Cell Biology and Physiology and Neurobiology

Andrew Trinh, Physiology and Neurobiology and History

Advisor: Joanne Conover, Associate Professor, Physiology and Neurobiology

Advisor: Qian Wu, Associate Professor, Pathology, UCHC

**130. A Mouse Model of Repeated Mild Traumatic Brain Injury**

Lillian Talbot, Physiology and Neurobiology and Molecular and Cell Biology

Ye Sun, Molecular and Cell Biology and Physiology and Neurobiology

Andrew Trinh, Physiology and Neurobiology and History

Richard Wolferz, Jr., Biological Sciences

Advisor: Joanne Conover, Associate Professor, Physiology and Neurobiology

**131. Using Grating Coupled Surface Plasmon Resonance Imaging and Surface Plasmon Coupled Emission to Create a Functional Phenotype of Mouse and Human T Lymphocytes**

Roberta Delvy, Molecular and Cell Biology and Anthropology

Advisor: Michael Lynes, Professor and Department Head, Molecular and Cell Biology

**132. Improvement of SPR Technology's Ability to Detect Toxins and Toxicants**

William Ollayos, Biological Sciences and English

Advisor: Micheal Lynes, Professor and Department Head, Molecular and Cell Biology

**133. Immune Modulation by a Novel Danger Signal in T Helper Lymphocyte Activation**

Katherine Han, Molecular and Cell Biology and English

Advisor: Michael Lynes, Professor and Department Head, Molecular and Cell Biology

**134. The Role of PIP2 in Regulating the Gating and Pharmacological Properties of KCNQ Channels**

Kevin Duignan, Physiology and Neurobiology

Advisor: Anastasios Tzingounis, Assistant Professor, Physiology and Neurobiology

**135. The Effects of Kinase Inhibitors on the Phosphatidylinositol 4-Phosphate 5-Kinase (PIP5K) Signaling Pathway**

Amit Mehta, Physiology and Neurobiology

Advisor: Anastasios Tzingounis, Assistant Professor, Physiology and Neurobiology

**136. Using Cross-Linking Immunoprecipitation (CLiP) to Determine a Mechanism for Acute Megakaryoblastic Leukemia**

Sonny Caplash, Biological Sciences

Advisor: Stephanie Halene, Assistant Professor of Medicine, Yale University

Advisor: Mark Pecuh, Associate Professor, Chemistry

**137. Nanoindentation Simulations of Norwalk Virus Capsids**

Kevin Boyd, Molecular and Cell Biology and Chemistry

Advisor: Eric May, Assistant Professor, Molecular and Cell Biology

**138. Increasing Colon Cancer Prevention by Vitamin D: Regulation of VDR Expression with Panobinostat and Bexarotene in a Mouse Colon Cancer Model**

Awaad Khan, Biological Sciences and Allied Health Sciences

Advisor: Charles Giardina, Associate Professor, Molecular and Cell Biology

**139. Characterizing the Interactions between WHAMM and Phospholipids**

Ashley Russo, Molecular and Cell Biology

Advisor: Kenneth Campellone, Assistant Professor, Molecular and Cell Biology

**140F. Assessing a Novel Method for Bone Marrow Aspiration in Pediatric Oncology**

Alexandra Buda, Molecular and Cell Biology

Advisor: Michael Isakoff, M.D., Pediatric Oncology, CCMC

Advisor: Sharon Smith, M.D., Emergency Department, CCMC

**141F. Optimizing the Bacteriorhodopsin Based Retinal Implant for Physiological Use**

Nandan Pandit, Molecular and Cell Biology

Advisor: Robert Birge, Distinguished Professor, Chemistry

**141S. Estrogen and the Male Gonad**

Robert Stickels, Molecular and Cell Biology

Advisor: Rachel O'Neill, Professor, Molecular and Cell Biology

Advisor: Andrew Pask, Associate Professor, Zoology, University of Melbourne, Australia

**142. The Centromere Drive Model of Evolution in Macropodine Marsupials**

Kathryn Ritz, Molecular and Cell Biology

Advisor: Rachel O'Neill, Professor, Molecular and Cell Biology

**143. Stepping into the Black Hole of Cancer Genetics: The Role of Repetitive Elements and Genomic Instability in Speciation and Disease**

Brendan Smalec, Molecular and Cell Biology and Art History

Advisor: Rachel O'Neill, Professor, Molecular and Cell Biology

**144. Cell Identity Transitions: Looking at Single Cells**

Steven Burger, Molecular and Cell Biology

Advisor: Craig Nelson, Associate Professor, Molecular and Cell Biology

**145. Reversing Effort-Related Impairments with the MAO-B Inhibitor Deprenyl**

Margaret Rowland, Psychology and Physiology and Neurobiology

Advisor: John Salamone, Distinguished Professor, Psychology

**146. Tremulous Jaw Movements Induced by the Anticholinesterase Galantamine: Studies with a Mouse Model of Parkinsonian Tremor**

Tiahna Spencer, Physiology and Neurobiology

Advisor: John Salamone, Distinguished Professor, Psychology

**147. Neurochemical Studies of Dopamine Tissue Levels and Metabolism after Administration of the VMAT-2 Inhibitor Tetrabenazine**

Laura Purcell, Individualized Major: Neuroscience

Advisor: John Salamone, Distinguished Professor, Psychology

**148F. Parkinsonism Induced by the VMAT-2 Inhibitor Tetrabenazine is Exacerbated by Coadministration of the SSRI Fluoxetine in Rodents**

Meredith Milligan, Biological Sciences

Advisor: John Salamone, Distinguished Professor, Psychology

**148S. Analysis of Individual Differences of the Sprague-Dawley Control Rats on a Progressive Ratio Choice Related Operant Task**

Alicia Fischer, Psychology

Advisor: John Salamone, Distinguished Professor, Psychology

**149. Hemispheric Communication in Schizophrenia: An EEG Case Study**

Jihee Kim, Allied Health Sciences

Advisor: Chi-Ming Chen, Assistant Professor, Department of Psychology

**150F. Knockdown of Candidate Dyslexia Susceptibility Gene Homolog Dyx1c1 in Male and Female Rodents: Effects on Thalamic Anatomy**

Beata Kaminska, Individualized Major: Developmental Neuropsychology and Spanish

Advisor: R. Holly Fitch, Professor, Psychology

**151F. Neural Substrates of Attention Deficit in a Rat Model of Premature Hypoxic-ischemic Injury**

Madeline Briere, Psychology (Non-degree)

Haley Garbus, Psychology

Advisor: R. Holly Fitch, Professor, Psychology

**152. Behavioral Outcomes in Models for Premature Hypoxic-Ischemic Injury Following Cooling**

Haley Garbus, Psychology

Advisor: R. Holly Fitch, Professor, Psychology

Advisor: Ted Rosenkrantz, Professor, Pediatrics, UCHC

Advisor: James Chrobak, Associate Professor, Psychology

**153F. Improving the Bioavailability of Curcumin: A New Formulation**

Anisha Mistry, Physiology and Neurobiology

Advisor: John Salamone, Distinguished Professor, Psychology

**153S. Effects of Chronic Ketamine on Cognitive Performance**

Melanie Castellanos, Psychology

Advisor: James Chrobak, Professor and Associate Department Head, Psychology

**154. Quantitative Comparison of Hippocampal Parvalbumin Interneurons Across Development**

Casey McMahon, Pathobiology

Advisor: James Chrobak, Professor and Associate Department Head, Psychology

**155. The Neuronal Expression of Parvalbumin-Expressing GABAergic Interneurons in the Barrel Field in Young and Adult Rats**

Chelsea Young, Individualized Major: Molecular Genetics

Advisor: James Chrobak, Professor and Associate Department Head, Psychology

**156F. Observing Brain Involvement in an Emotional Experience Using Immediate Early Genes**

Kaylene King, Physiology and Neurobiology

Youstina Youssef, Cognitive Science

Tabitha D'Souza, Graduate, Physiology and Neurobiology, May 2012

Advisor: Etan Markus, Professor and Associate Department Head, Psychology

Advisor: Diano Marron, Associate Professor, Psychology, Wilfrid Laurier University

**156S. Discovering the Sequence Specificity of the BGLF-4 Protein Kinase in Epstein-Barr Virus and Predicting Host Substrates**

Julie Klaric, Biological Sciences

Advisor: Daniel Schwartz, Assistant Professor, Physiology and Neurobiology

**157F. Comparison of Dorsal and Ventral Hippocampal Theta Power during Learning**

Rachel Jackson, Cognitive Science and Economics

Greg Newman, Psychology

Stephanie Vu, Physiology and Neurobiology

Xiao Li, Physiology and Neurobiology

Advisor: Etan Markus, Professor and Associate Department Head, Psychology

**157S. Investigating Novel Propargyl-Linked Antifolates in Inhibiting Bacteria**

Joshua Andrade, Molecular and Cell Biology

Advisor: Amy Anderson, Professor and Acting Department Head, Pharmaceutical Sciences

**158F. Circadian Rhythm Patterns and Cognitive Function in Aged Rats**

Victoria Wickenheisser, Physiology and Neurobiology

Advisor: Etan Markus, Professor and Associate Department Head, Psychology

**158S. Adaptive Immune Response to Neo-Antigens Generated In Vivo by Spontaneous Mutations**

Rory Geyer, Molecular and Cell Biology

Advisor: Pramod Srivastava, Professor, Immunology, and Director, Carole and Ray Neag Comprehensive Cancer Center, UCHC

**159. Where is My Next Class? Examination of Episodic Memory Through Forward Learning of Chronological Locations**

Sarthak Patel, Physiology and Neurobiology

Shang Lin (Tommy) Lee, Biological Sciences and Psychology

Brian Timmerman, Psychology

Victoria Wickenheisser, Physiology and Neurobiology

Tabitha D'Souza, Graduate, Physiology and Neurobiology, May 2012

Advisor: Etan Markus, Professor and Associate Department Head, Psychology

**160. Where is My Next Class? Examination of Episodic Memory Through Backward Learning of Chronological Locations**

Brian Timmerman, Psychology

Shang Lin (Tommy) Lee, Biological Sciences and Psychology

Kyle Jenkins, Biological Sciences and Psychology

Yezmin Crespo-Adomo, Physiology and Neurobiology

Advisor: Etan Markus, Professor and Associate Department Head, Psychology

**161. Design and Development of a Cross-linking Construct of the Protein Kinase R by Incorporation of an Unnatural Amino Acid**

Prisma Lopez, Molecular and Cell Biology

Advisor: James Cole, Professor, Molecular and Cell Biology

**162. Virulence Phenotype in Animal Models and Genome Comparisons of Environmental and Veterinary *Aeromonas veronii* Isolates**

Stephanie Ha, Molecular and Cell Biology

Advisor: Joerg Graf, Associate Professor, Molecular and Cell Biology

**163. Elucidating the Mechanism of Action of Small Molecule Inhibitors of the Hedgehog Signaling Pathway**

Daniel Madden, Molecular and Cell Biology

Advisor: Kyle Hadden, Assistant Professor, Pharmaceutical Sciences

**164. Development of a Mouse Model for the Disease of Heterotopic Bone Formation, Fibrodysplasia Ossificans Progressiva**

Samantha Cummins, Molecular and Cell Biology and Individualized Major:  
Global Health and Social Issues

Advisor: David Goldhamer, Professor, Molecular and Cell Biology

**165. Chemical Profiling and Biological Activity of Two Tunicate-Associated Marine Bacteria**

Lyubina Yankova, Molecular and Cell Biology

Advisor: Marcy Balunas, Assistant Professor, Pharmaceutical Sciences

## School of Pharmacy

**166. Frankia Symbioses and Natural Product Drug Discovery**

Julie Costello, Doctor of Pharmacy

Advisor: Marcy Balunas, Assistant Professor, Medicinal Chemistry

## College of Liberal Arts and Sciences

**167. Regulation of Dendritic Spine Morphology by BRAG1, a Protein Associated with X-Linked Intellectual Disability**

Erin Good, Physiology and Neurobiology

Advisor: Randall Walikonis, Associate Professor, Physiology and Neurobiology

**168. Analysis of Ax2 Dictyostelium Discoideum Motility Under Varied Conditions**

Matei Manea, Molecular and Cell Biology

Advisor: David Knecht, Professor, Molecular and Cell Biology

**169. Enhancing the Activity of Antimicrobial Peptides by Means of Inorganic Chemistry**

Sai Nagella, Molecular and Cell Biology

Advisor: Alfredo Angeles-Boza, Assistant Professor, Chemistry

**170F. Addressing Heart Disease through Community Health Workers (CHW): A Community-level Approach to Improving Access among the Underserved in Hartford, CT**

Mitali Mali, Physiology and Neurobiology and Human Rights

Advisor: Randall Walikonis, Associate Professor, Physiology and Neurobiology

Advisor: Teresa Frankhauser, Respiratory Therapist/Community Health Worker,  
Central CT Area Health Education Center

**171. A Comparison of Traits in Native Alternatives to Invasive Plant Species**

Kylie Martinod, Ecology & Evolutionary Biology

Advisor: John Silander, Professor Emeritus, Ecology and Evolutionary Biology

**172. Salinity Preference of Threespine Stickleback over Early Development**

Samantha Beynor, Biological Sciences

Advisor: Eric Schultz, Professor, Ecology and Evolutionary Biology

**173. Effect of the Invasive Zebra Mussel on Rainbow Smelt Feeding Ecology in the Hudson River**

Cody Roberge, Ecology and Evolutionary Biology

Advisor: Eric Schultz, Professor, Ecology and Evolutionary Biology

**174. Investigation into the Development of Magicicada of Different Species throughout the Eastern United States**

Erin Dwyer, Physiology and Neurobiology

Advisor: Chris Simon, Professor, Ecology and Evolutionary Biology

**175. Phylogenetic Identification of Green Algae that Symbiose with Spotted Salamander Eggs**

Crystal Xue, Molecular and Cell Biology

Advisor: Louise Lewis, Professor, Ecology and Evolutionary Biology

**176. Gene Trees vs Species Trees: Piecing Together the Evolutionary History of the New Zealand Cicada Genus Kikihia**

Sarah Banker, Molecular and Cell Biology

Advisor: Chris Simon, Professor, Ecology and Evolutionary Biology



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## Special Thanks

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