FRONTIERS

IN UNDERGRADUATE RESEARCH

Eighteenth Annual
Poster Exhibition

A CELEBRATION OF SCHOLARSHIP, INNOVATION, CREATIVITY, AND COLLABORATION

April 10, 2015

3:30 p.m. – 4:30 p.m.

April 11, 2015

11:30 a.m. – 2:00 p.m.

UCONN

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 2015 is the eighteenth annual Frontiers event sponsored by the Office of Undergraduate Research (OUR). This year's poster exhibition includes 231 students presenting posters for 207 research projects, with some students presenting on Friday or Saturday only.

The projects span the disciplines and include both independent research and work pursued 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 nominees and winners 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) is a resource for students interested in enriching their undergraduate experience through participation in research, scholarship, and creative activity. Our office provides information and advising to assist students in identifying relevant opportunities, 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 over $377,000 in 2013-2014 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 10, 2015 3:30 p.m. – 4:30 p.m. Saturday, April 11, 2015 11:30 a.m. – 2:00 p.m.
Student and Faculty Reception	Friday, April 10, 2015 4:30 p.m. – 5:30 p.m.

Introduction and Welcome

Caroline McGuire, Director, Office of Undergraduate Research

Presentation of the Mentorship Excellence Awards

Faculty Award

George Bollas, Assistant Professor, Chemical & Biomolecular Engineering

Presented by **Ari Fischer '15** (ENG)

Graduate Student Award

Christopher Kelly, Ph.D. Student, Chemistry

Presented by **Giorgina Paiella '16** (CLAS)

Closing Remarks

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

Reception Music

Original compositions by **Vincent LaMonica '15** (SFA), UConn IDEA Grant recipient

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.

UConn IDEA Grant Recipients

1. Etch-A-Bot: A CNC machine by Many Names
Dillon Jones, Computer Science and Engineering
Advisor: Jeffrey Meunier, Lecturer, Computer Science and Engineering

2. CUP: A Visio-Relational Search Engine for Biomedical Information
Jesse Wang, Physiology and Neurobiology
Advisor: Daniel Schwartz, Assistant Professor, Physiology and Neurobiology

3. Looking Beyond the Genetic Code: Mapping the Epigenomic Landscape of Tumorigenesis and Metastasis in the White-Footed Mouse
Brendan Smalec, Molecular and Cell Biology and Art History
Advisor: Rachel O’Neill, Professor, Molecular and Cell Biology

4. Characterization of the Extent and Source of Nutrients Supporting a Massive Macroalgae Bloom in Little Narragansett Bay, CT
Amanda Dostie, Marine Sciences
Advisor: Jamie Vaudrey, Assistant Research Professor, Marine Sciences

5. Small Plants, Big Questions: Asian Waterwort and Threestamen Waterwort
Aaron Rosman, Natural Resources
Advisor: Donald Les, Professor, Ecology and Evolutionary Biology

6. The Role of Drosophila adipocyte Secretions in Female Fertility
Sarah Mosure, Biological Sciences
Advisor: Jianjun Sun, Assistant Professor, Physiology and Neurobiology

7. Prophylactic Supplementation of Trans-Cinnamaldehyde in Feed Protects Mice from Uropathogenic Escherichia coli Associated Urinary Tract Infection
Amoolya Narayanan, Psychology
Advisor: Mary Anne Amalaradjou, Assistant Professor, Animal Science

8. Effects of Poor Maternal Nutrition during Gestation on Gene Expression in Liver Tissue in Lambs
Katelyn McFadden, Animal Science,
Advisor: Kristen Govoni, Assistant Professor, Animal Science
Advisor: Steven Zinn, Professor and Department Head, Animal Science
Advisor: Sarah Reed, Assistant Professor, Animal Science

9. Technology-Based Alternative Note-taking Methods for College Students with Disabilities
Kate Craddock, Biomedical Engineering
Ryan Rood, Biomedical Engineering
Advisor: Donna Korbel, Director, Center for Students with Disabilities
Advisor: Kimberly McKeown, Project Manager, Center for Students with Disabilities

10. Alternative Learning in Students with IEPs: Exploring the Effects of Art, Music, and Dance on Elementary Math
Annaliese Sehulster, Psychology
Advisor: Jamie Kleinman, Assistant Professor in Residence, Psychology

11. Self-Esteem, Motivation, and Healthy Lifestyles in College Students
Jennifer Selensky, Psychology and Spanish
Advisor: Amy Gorin, Associate Professor, Psychology

12. Prevalence and Risk Factors for Depression, Anxiety, and Alcohol Abuse Among Connecticut Migrant Farm Workers
Saher Kazi, Molecular and Cell Biology
Advisor: Kevin Dieckhaus, Associate Professor of Medicine, Division of Infectious Diseases, UConn Health

13. Negotiating Conflicting Identities: The Case of Mormon Feminists
Rebecca Barton, Sociology and Women's, Gender, and Sexuality Studies
Advisor: Matthew Hughey, Associate Professor, Sociology
Advisor: Ruth Braunstein, Assistant Professor, Sociology

14. Bridging Theory and Practice: A Critical Examination of Modern Day Slavery
Robert Anderson, Individualized Major: International Development and Human Rights
Advisor: Cathy Schlund-Vials, Associate Professor, English, and Director, Asian American Studies Institute

15. Visualizing Human Trafficking
David Pereira, Fine Arts - Communication Design
Advisor: Cathy Schlund-Vials, Associate Professor, English, and Director, Asian American Studies Institute

16. Cliography: Historical Geospatial Analysis
Zachary Raslan, History
Advisor: Michael Howser, University Librarian

17. it's a dream: Memories of the Cuban Revolution
Ashley Frato, Fine Arts – Sculpture
Advisor: Ray DiCapua, Associate Professor, Art and Art History

18. Studying Color and Light in Tuscany
Marissa Stanton, Fine Arts – Individualized Concentration
Advisor: Deborah Dancy, Professor, Art and Art History

19. Makyo
Feifei Luo, Art - Individualized concentration
Advisor: Laurie Sloan, Associate Professor, Art and Art History
Advisor: Ray DiCapua, Associate Professor, Art and Art History

20. Pollataggle: A Photobook Project
Kaitrin Acuna, Art – Photography
Advisor: Anne D'Alleva, Professor, Art and Art History

21. The Red Heifer: A Graphic Novel on Holocaust Postmemory
Julianne Norton, Individualized Major: International Relations
Advisor: Cora Lynn Deibler, Professor, Art and Art History

22. Exsistentia 2015, Did You See Us?
Emmanuel Oppong-Yeboah, English and Urban and Community Studies
Joseph Rosen, English
Advisor: Penelope Pelizzon, Associate Professor, English

School of Fine Arts

23F. Studying with a Living Composer in France as a Means of Building Experience as a Vocal Performer
Elizabeth Hayes, Music - Vocal Performance
Advisor: Meredith Ziegler, Adjunct Faculty, Music

23S. "O gracious Light" - An Anthem for Unaccompanied Mixed Choir
Nathan Fletcher, Music – Composition
Advisor: James Spillane, Associate Professor, Music
Advisor: Kenneth Fuchs, Professor, Music

24. The Intersection of Art and Science
Antonio Campelli, Studio Art - Painting and Sculpture
Advisor: Ray DiCapua, Associate Professor, Art and Art History
Advisor: Laurie Sloan, Associate Professor, Art and Art History
Advisor: Kathryn Myers, Associate Professor, Art and Art History

25. The 25th Annual Putnam County Spelling Bee Scenic Design
Lindsay Duval, Design/Technical Theatre, Co-Scenic Designer
Advisor: Tim Brown, Assistant Professor in Residence, Dramatic Arts, Co-Scenic Designer
Advisor: Edward Weingart, Assistant Professor, Dramatic Arts

College of Agriculture, Health and Natural Resources

26. Density and Age of Exurban Development Affect the Presence and Abundance of Eurycea bislineata and Desmognathus fuscus
D. Cristina Macklem, Ecology and Evolutionary Biology
Advisor: Tracy Rittenhouse, Assistant Professor, Natural Resources and the Environment

27. Using Distance Sampling to Estimate Density of Newly Metamorphosed Amphibians
Jaron Kolek, Natural Resources
Advisor: Tracy Rittenhouse, Assistant Professor, Natural Resources and the Environment

School of Engineering

28. Decentralized Control of UAVs for 3-D Map Generation
Andrew Lawson, Computer Science and Engineering
Advisor: Shalabh Gupta, Assistant Professor, Electrical and Computer Engineering

29. Nanoscale Property Mapping of VO2 Thin Films for Energy Efficient 'Smart Windows'
Aliya Carter, Materials Science & Engineering
Advisor: Bryan Huey, Associate Professor, Materials Science and Engineering

30. Understanding the Role of Confinement in Nanostructured Thermoelectic Networks Realized through Block Copolymer Templating
Yingzhi Wu, Mechanical Engineering
Advisor: Michael Pettes, Assistant Professor, Mechanical Engineering

College of Liberal Arts and Sciences

31. Under Attack: Exploring the Effects of Politicized Attack Advertisements on Judicial Legitimacy
Molly Rockett, Political Science
Advisor: Virginia Hettinger, Associate Professor, Political Science

32. How They Know it When They See It: Analyzing Voting Behavior in the U.S. Court of Appeals for Obscenity Cases
Cathleen Lisk, Political Science
Advisor: Virginia Hettinger, Associate Professor, Political Science

33. Outside Spending in Congressional Elections
Riley Hasson, Political Science
Advisor: Paul Herrnson, Professor, Political Science and Director, Roper Center for Public Opinion Research

34F. Single-Candidate Super PACs in the 2014 Congressional Elections
ChristianCaron, Political Science
Advisor: Paul Herrnson, Professor, Political Science and Director, Roper Center for Public Opinion Research

34S. Convention Compliance: Protecting Orphaned Children in Kenya under the United Nations Convention on the Rights of the Child
Christina Reese, Political Science
Advisor: Molly Land, Professor, UConn School of Law
Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor and POLS Honors Director, Political Science

35F. The "Tipping Point" in Climate Change: When and How States Choose to Cooperate in Regional Initiatives
Sarah Purtill, Political Science
Advisor: Mark Boyer, Distinguished Professor, Political Science

35S. Public Opinion and Health Care Reform
Emma Wager, Political Science
Advisor: Paul Herrnson, Professor, Political Science and Director, Roper Center for Public Opinion Research

36F. What Role Do Special Interest Groups play in Shaping U.S. policy: The Case of Bankruptcy Reform
Phillip Menard, Political Science
Advisor: Thomas Hayes, Assistant Professor, Political Science

36S. How do Syrian Refugees Understand their Educational Experiences in Jordan?
Phillip Menard, Political Science
Advisor: Elizabeth Holzer, Assistant Professor, Sociology

37. Throw the Bums Out: Public Attitudes Toward Scandal-Plagued Incumbents
Erin Puglia, Political Science
Advisor: Vincent Moscardelli, Assistant Professor, Political Science

38. Observations on the Genderization of Security: A University (UConn/Avery Point) Community Perspective
Kaitlin Pealer, Anthropology
Advisor: Richard Cole, Assistant Professor in Residence, Political Science

39F. Muslim Masculinities: A Methodological Study of the Qur'an
Abdullah Hasan, Political Science
Advisor: Zehra Arat, Professor, Politcial Science

39S. Strategic Priorities: U.S. Oil Imports and American Foreign Policy, 1970-2010
Linnea Logie, Political Science
Advisor: Oksan Bayulgen, Associate Professor, Political Science

40. Impact of the "Nirbhaya" Rape Case: Isolated Phenomenon or Social Change?
Tina Lapsia, Political Science
Advisor: Betty Hanson, Professor Emeritus, Political Science

41. MicroConsignment as Magic or Sleight-of-Hand: How Social Entrepreneurship Affects Women's Political and Economic Participation in Guatemala
Briana Bardos, Political Science
Advisor: David Richards, Associate Professor, Political Science
Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor and POLS Honors Director, Political Science

42. Written in Black and White: Race, Poverty, and Education in South Africa
Alexandra Ball, Political Science
Advisor: Shareen Hertel, Associate Professor, Political Science

43. Perpetuating Poor Governance: The Role of Oil MNCs in Nigeria, Mexico, and Venezuela
Nellie Binder, Individualized Major: International Relations
Advisor: Mark Boyer, Distinguished Professor, Political Science

44. Too Much of a Good Thing? Excess Legitimacy and Democratic Principles in Argentina
Katie Cavanaugh, Political Science
Advisor: Matthew Singer, Associate Professor, Political Science

45. Prior Art Search and Settlement Negotiations in Patent Dispute
Brendan Costello Economics
Advisor: Talia Bar, Assistant Professor, Economics

46. Deferred Examination
Patrick Adams, Economics
Advisor: Talia Bar, Assistant Professor, Economics

47F. Estimating Causal Effects in Incomplete Observational Studies using Multiple Imputation and Propensity Score Analysis: A Simulation Study
Alessandra Valcarcel, Statistics
Advisor: Ofer Harel, Associate Professor, Statistics

47S. Analysis of Longitudinal Behavioral Data
Yang Liu, Statistics
Advisor: Nalini Ravishanker, Professor, Statistics

48. Efficient Coupling for Random Walk with Redistribution
Elizabeth Tripp, Mathematics
Advisor: Iddo Ben-Ari, Associate Professor, Mathematics

49. Partial Metric Spaces: Representation & Classification
Shaun Benvie, Mathematics
Advisor: Elizabeth Brown, Associate Professor, Mathematics and Statistics, James Madison University

50. Exploring Prunus Domestication in the Southern Caucasus
Joyce Fountain, Anthropology and Individualized Major: Environmental Archaeology
Advisor: Alexia Smith, Assistant Professor, Anthropology

51. “Cause I've Never Been Free:” Examining the U.S State, Liberatory Lyrics, and Assata Shakur
Martina Powell, Women's, Gender, & Sexuality Studies
Advisor: Heather Turcotte, Assistant Professor, Political Science and Women’s, Gender, and Sexuality Studies

52F. Revisiting Iconoclasm: Image and Power in Byzantium and Early Islamic Syria
Eric Medawar, Classics and Ancient Mediterranean Studies (CAMS)
Advisor: Fakhreddin Azimi, Professor, History

52S. The Love Triangle: How Twilight, The Hunger Games and Divergent Defy and Affirm the Power of Romance and Sex When Defining Female Characters
Tara Pealer, English
Advisor: Pamela Bedore, Associate Professor, English

53F. Stressing About Stress; Student Stress Culture at the University
Rebecca Allen, Anthropological Health Sciences
Advisor: Pamela Erickson, Professor and Department Head, Anthropology

53S. Maternal Childhood Sexual Abuse (CSA) and Mother Adolescent Interaction
Nordia Meggie, Psychology
Advisor: Stephanie Milan, Associate Professor, Psychology

54. Embodying God's Final Word: Understanding the Dynamics of Prophecy in the Ancient Near East and Early Monotheistic Tradition
Naila Razzaq, Individualized Major: Ancient Near East
Advisor: Stuart Miller, Professor, Literatures, Cultures, and Languages

55. Reading Ability Influences Perceptual Learning of Talker-specific Phonetic Detail
Katlyn Salvador, Speech, Language, and Hearing Sciences
Advisor: Rachel Theodore, Assistant Professor, Speech, Language, and Hearing Sciences

56. Effects of Reading Ability on Lexically-informed Perceptual Learning
Emily Thompson, Speech, Language, and Hearing Sciences
Advisor: Rachel Theodore, Assistant Professor, Speech, Language, and Hearing Sciences

57. Impacts of Binaural Fittings and Bone Oscillator Placement on Measures of the Occulsion Effect
Nicole Mui, Speech, Language, and Hearing Sciences
Torri Ann Woodruff, Speech, Language, and Hearing Sciences
Advisor: Kathleen Cienkowski, Associate Professor, Speech, Language, and Hearing Sciences

58. Comparing Auditory Processing Across Musicians, Strong Readers, and Below Average Readers
Lisa Brody, Speech, Language, and Hearing Sciences
Sarah Camera, Speech, Language and Hearing Sciences and Music
Advisor: Erika Skoe, Assistant Professor, Speech, Language , and Hearing Sciences

59F. Language Development and EEG Mu Rhythm in Early Childhood
Kimberly Valerio, Psychology
Advisor: Kimberly Cuevas, Assistant Professor, Psychology

59S. Learning a Count List Supports Exact Representation of Quantity: Evidence From a Deaf Child Before and After Exposure to Sign Language
Cassandra Svelnys, Psychology
Advisor: Marie Coppola, Assistant Professor, Psychology and Linguistics

60. Student Support Services Involvement and Student Academic Success
Ayaa Elgoharry, Human Development and Family Studies
Advisor: Kari Adamsons, Associate Professor, Human Development and Family Studies

61. Electrophysiological Changes of N100 Latency and Amplitude in Healthy Participants Performing Jitter Orientation Visual Integration Task: A Multi-block Design Study
Fariya Naz, Psychology
Advisor: Chi-Ming Chen, Assistant Professor, Psychology

62. Trials, Tribulations, and Transitions: Investigating Adolescents' Perceptions of Academic-Related Problems
Elyssa Eisenberg, Psychology
Advisor: Rhiannon Smith, Assistant Professor, Psychology

63. Social Interaction Between Individuals Given a Task
Victoria Ho, Biological Sciences
Aliya Subhit, Psychology and Human Development and Family Studies
Cassandra Zywarycz, Psychology and Human Development and Family Studies
Jessica Seabrooke, Psychology
Kaylene Mago, Psychology
Advisor: Adam Sheya, Assistant Professor, Psychology

64. Emotion Word Development in Children with Autism Spectrum Disorders
Rachel Nyakako, Cognitive Science
Advisor: Letitia Naigles, Professor, Psychology

65. Does Parental Input during Joint Attention Differ for TD children and Children with ASD?
Emily McCaffrey, Speech, Language, and Hearing Sciences
Advisor: Letitia Naigles, Professor, Psychology
Advisor: Deborah Fein, Distinguished Professor, Psychology

66F. Comparison of Parent and Clinician Report of Child Language and Motor Abilities in Two-Year-Old Children With and Without Autism
Kayla Perkins, Psychology
Advisor: Deborah Fein, Distinguished Professor, Psychology

School of Nursing

66S. Neonatal Nurses' Perceptions of Mother-Infant Skin-to-Skin Contact in NICUs: A National Survey
Kelsey Richardson, Nursing
Advisor: Xiaomei Cong, Associate Professor, Nursing

College of Liberal Arts and Sciences

67. The Process of Identifying HIV Positive: Understanding the Identity Changes of Newly Diagnosed Individuals Living with HIV and Potential Health Implications
Christopher Kegler, Psychology and Allied Health Sciences
Advisor: Lisa Eaton, Assistant Professor, Human Development and Family Studies

68. College Males' Knowledge, Attitudes and Practices around Casual Sex and Hook Up Culture
Jason Meier, Human Development and Family Studies
Advisor: Marysol Asencio, Professor, Human Development anf Family Studies

69. The Role of Attachment and Rejection Sensitivity in the Evaluations of and Experiences With Sexting Among Young Adults
Emily Rankin, Human Development and Family Studies
Advisor: Alaina Brenick, Assistant Professor, Human Development and Family Studies

70. Maternal Gatekeeping's Impact on Father Daughter Relationships
Carver Murphy, Human Development and Family Studies
Advisor: Kari Adamsons, Associate Professor, Human Development and Family Studies

71. Identifying Strategies for Family Engagement in Low Income Schools
Melissa Lovitz, Human Development and Family Studies
Advisor: Alaina Brenick, Assistant Professor, Human Development and Family Studies

72. Patterns in Impulsivity and Emotion Regulation: A Comparison of Substance Use Recovery Students
Kelly Romano, Human Development and Family Studies
Morica Hutchison, Psychology and Human Development and Family Studies
Advisor: Beth Russell, Assistant Professor, Human Development and Family Studies

73. Adolescents in Substance Use Recovery: Patterns in Emotion Regulation and Behavior
Morica Hutchison, Psychology and Human Development and Family Studies
Advisor: Beth Russell, Assistant Professor, Human Development and Family Studies

School of Nursing

74. Physicians Knowledge, Perceptions, Barriers and Practice of Kangaroo Care
Shilla Thomas, Nursing and Biology
Advisor: Arthur Engler, Associate Professor, Nursing

75. Registered Nurses' Perceptions of Kangaroo Care
Alexis Oseiwusu, Nursing
Advisor: Arthur Engler, Associate Professor, Nursing

76. Nutritional and Exercise Patterns In Nicaraguan Youth
Emily Bak, Nursing
Advisor: Kelley Newlin-Lew, Assistant Professor, Nursing

77. Evaluation of Nursing Knowledge of Early Initiation of Breastfeeding in Preterm Infants in a Hospital Setting
Rebecca Smith, Nursing
Advisor: Ruth Lucas, Assistant Professor, Nursing

78F. Development and Validation of an Accumulated Pain/Stressor Scale (APSS) in the NICU
Taylor Meegan, Nursing
Advisor: Xiaomei Cong, Associate Professor, Nursing

78S. Certified Nurse Midwives' Attitudes, Knowledge, and Prescribing Practices of Evidence-based Recommendations for Omega-3 Intake in the Obstetric Population
Corrinne Kuzoian, Nursing
Advisor: Michelle Judge, Assistant Professor, Nursing
Advisor: Colleen Delaney, Associate Professor, Nursing

College of Liberal Arts and Sciences

79F. We, the Policymakers: The Impact of Public Opinion on Sate Minimum Wage Policy Adoption
Ryan Rubega, Political Science and Economics
Advisor: Vincent Moscardelli, Assistant Professor, Political Science

School of Nursing

79S. Vietnamese Women's Childbirth Experiences in Vietnam and U.S.
Timothea Vo, Nursing
Advisor: Cheryl Beck, Distinguished Professor, Nursing

College of Liberal Arts and Sciences

80. Correctional Nurse Perceived Competency Following Training
Shelja Patel, Physiology and Neurobiology
Advisor: Deborah Shelton, Professor, Nursing

81. Construction and Testing of the Photon Tagger Microscope for the GlueX Experiment
Liana Hotte, Physics – General
Advisor: Richard Jones, Associate Professor, Physics

82. Compound-specific Isotope Hydrology of the Bull Run Basin during the Late Eocene to Early Oligocene; Implications for Paleoelevation and Paleoclimate Studies
Gregory Harris, Environmental Science
Advisor: Michael Hren, Assistant Professor, Chemistry, and Center for Integrative Geosciences

83. Characterization of Manganese Oxides Doped with Various Transition Metals
Jessica Murdzek, Chemistry
Advisor: Steven Suib, Distinguished Professor, Chemistry, and Director, Materials Science Institute

84F. Translesional Synthesis DNA Polymerases: Role of Rev1 in DNA Damage Tolerance Pathway
Maciej Kosakowski, Biology
Advisor: Ashis Basu, Professor, Chemistry
Advisor: Dmitry Korzhnev, Assistant Professor, Department of Molecular Biology and Biophysics, UConn Health

84S. Analysis of Organic Contaminants of Marine Sediment by GC-MS/MS utilizing Accelerated Solvent Extraction and In-cell Sample Clean Up
Emmanuel Omari, Molecular and Cell Biology
Advisor: Anthony Provatas, Project Scientist, Center for Environmental Sciences and Engineering
Advisor: James Stuart, Professor Emeritus, Chemistry and Center for Environmental Sciences and Engineering
Advisor: Christopher Perkins, Laboratory Director, Center for Environmental Sciences and Engineering

85. Analysis of Melanins, Carotenoids, and Porphyrins from Keratinized Tissues of Vertebrates
Randy Hamchand, Biological Sciences
Advisor: Harry Frank, Distinguished Professor Emeritus, Chemistry
Advisor: Amy LaFountain, Frank Group Coordinator, Chemistry

86. UPLC-UV Determination of Polycyclic Aromatic Hydrocarbons in Dried Blood Spots by Novel Phospholipid Solid Phase Extraction
Cory King, Chemistry
Advisor: Anthony Provatas, Projecct Scientist, Center for Environmental Sciences and Engineering

87F. Stem Cell Regulation: DNA-binding Investigation of the PRC1 SCML2 Subunit
Sherif Eldirany, Chemistry
Advisor: Irina Bezsonova, Assistant Professor, Molecular Biology and Biophysics, UConn Health

87S. Old Reaction, New Insights: The Structures of All Regioisomers of Oxo- and Dioxochlorins
Elizabeth Kaesmann, Chemistry
Advisor: Christian Brückner, Professor, Chemistry

88. Methods Development in Green Chemistry using Fluoroform and Oxoammonium Salts
Rebecca Wiles, Chemistry
Advisor: Nicholas Leadbeater, Associate Professor, Chemistry

89. Charting New Territory in Oxoammonium Salt Oxidations
John Ovian, Chemistry
Advisor: Nicholas Leadbeater, Associate Professor, Chemistry

90. Synthesis and Characterization of 2'-Deoxyguanosine Adducts of the Cancer-Causing Agents, 1-Nitropyrene and 6-Nitrochrysene
Kimberly Rebello, Chemistry
Advisor: Ashis Basu, Professor, Chemistry

School of Engineering

91. The Studies of Short-chain Phosphatidylcholine Effect on the Spontaneous Lipid Transfer in Phospholipid-based Vesicles using Differential Scanning Calorimetry
Kamil Charubin, Chemical Engineering
Advisor: Mu-Ping Nieh, Associate Professor, Chemical and Biomolecular Engineering

92. Reactor Design and Analysis of a Simulated Moving Bed Reactor for Chemical-Looping Combustion
Clarke Palmer, Chemical and Biomolecular Engineering
Advisor: George Bollas, Assistant Professor, Chemical and Biomolecular Engineering

93. Incorporation of High Pressure CLC into IGCC Systems for Carbon Capture
Oscar Nordness, Chemical Engineering
Advisor: George Bollas, Assistant Professor, Chemical and Biomolecular Engineering

94. Culture Methods for Primary Adult Rat Cardiomyocytes
Talya Mandelkern, Biomedical Engineering
Advisor: Pamela Lucchesi, Director, Center for Cardiovascular and Pulmonary Research, The Research Institute at Nationwide Children's Hospital, and Professor, Department of Pediatrics, The Ohio State University Medical Center
Advisor: Keith Gooch, Associate Professor, Biomedical Engineering, The Ohio State University

95F. Biodegradable Injectable Implants for Long-Term Delivery of Contraceptives and Other Therapeutics
Ohan Manoukian, Biomedical Engineering
Advisor: Sangamesh Kumbar, Assistant Professor, Orthopaedic Surgery, UConn Health

95S. A Study of Protist Motility and Its Implications for Protist Communication
Paige Orlofsky, Chemical Engineering and German Studies
Advisor: Leslie Shor, Assistant Professor, Chemical and Biomolecular Engineering
Advisor: Mike Shor, Associate Professor, Economics

96. Fluorescence Nitro-Explosive Detection through Electrospun Pyrene-PES Nanofibers
George Shaw, Chemical Engineering
Advisor: Yu Lei, Associate Professor, Chemical and Biomolecular Engineering

College of Liberal Arts and Sciences

97. Enhancing the Activity of Antimicrobial Peptides by conjugation to the Amino Terminal Copper and Nickel(ATCUN) Binding Unit
Sai Nagella, Molecular and Cell Biology
Advisor: Alfredo Angeles-Boza, Assistant Professor, Chemistry

98. Rapid Screening of Algal Toxins in Freshwater Using Simple Sample Preparation Followed by UPLC-MS/MS
Andrew Bell, Chemistry
Advisor: Anthony Provatas, Project Scientist, Center for Environmental Sciences and Engineering
Advisor: James Stuart, Professor Emeritus, Chemistry and Center for Environmental Sciences and Engineering

School of Pharmacy

99. In Vitro Analysis of a Novel Doxorubicin-containing Polymeric Nanoparticle for Improved Cancer Treatment Outcomes
Sarah Warack, Pharmacy
Advisor: Xiuling Lu, Assistant Professor, Pharmaceutical Sciences

College of Liberal Arts and Sciences

100. Preparation of Strained Heterocycles Towards the Synthesis of Laureoxolane
Patrick Smith, Chemistry
Advisor: Amy Howell, Professor and Department Head, Chemistry

101. Synthesis of An Alpha-GalCer Analog With BODIPY Fluorescent Marker
Tania Mohamed, Chemistry
Advisor: Amy Howell, Professor and Department Head, Chemistry

102. Effective Antisense Design Using An Ensemble of Energetically Sub-Optimal Secondary mRNA Structures
Andrea DiVenere, Chemical Engineering and Molecular and Cell Biology
Advisor: Ranjan Srivastava, Associate Professor, Chemical and Biomolecular Engineering

103. Earthquake Engineering Research Institute Undergraduate Seismic Design Competition
Alexandra Hain, Civil Engineering
Dylan Allen, Civil Engineering
Hamza Aslam, Civil Engineering
Advisor: Arash Zaghi, Assistant Professor, Civil and Environmental Engineering

104. Analyzing ROS Generation from Magnetic Nanoparticles in an Alternating Magnetic Field and its Role in Intracellular Hyperthermia
Catherine Oliver, Biomedical Engineering
Advisor: J. Zach Hilt, Associate Professor, Chemical and Materials Engineering, University of Kentucky
Advisor: Kimberly Anderson, Professor, Chemical and Materials Engineering, University of Kentucky

105F. Analysis of Heat Transfer in a Complex Three Dimensional Structure Fabricated By Additive Manufacturing
Casey Settle, Biomedical Engineering
Advisor: Kazunori Hoshino, Assistant Professor, Biomedical Engineering

105S. Modeling of Phase Change Memory Devices Using a Dynamic Crystal Density Approach
Zachary Woods, Biomedical Engineering
Advisor: Ali Gokirmak, Associate Professor, Electrical and Computer Engineering

106. Mapping the Spatial Distribution of the Voltage-Gated Potassium Channel Kv10.1 in the HeLa Cell Membrane Using Single-Molecule Force Spectroscopy
Jessica Hockla, Biomedical Engineering
Advisor: George Lykotrafitis, Assistant Professor, Mechanical Engineering

107. Continuous Flow Cell Labelling of Circulating Tumor Cells (CTCs) using Microfluidic Devices

Nabid Ahmed, Biomedical Engineering
Advisor: Derek Hansford, Associate Professor, Biomedical Engineering, The Ohio State University

School of Business

108. Determining the Need for Prescription Recording Modules for Illiterate Patients in Guatemala

Steven Graf, Healthcare Management
Charles Fayal, Biomedical Engineering and Electrical Engineering
Advisor: Patrick Kumavor, Assistant Professor in Residence, Biomedical Engineering

Technology Incubator Program

109. Development of High-Throughput Diagnostic Single Reaction PCR Assays for Trait Identification and Zygosity Determination

Sara Tewksbury, Molecular and Cell Biology
Advisor: Christopher “Kit” Bonin, Senior Biochemist & Plant Analysis Lead, Agrivida, Inc.

110F. UConn TIP Communications

Madalyn Ellis, Communications
Advisor: Natalie D'Oyen, Associate Director, Technology Incubation Program & Technology Exchange Portal

110S. Towards the Molecular Confirmation of Non-Transgenic Status for Precision-Engineered Maize

James McGann, Molecular and Cell Biology
Advisor: Christopher “Kit” Bonin, Senior Biochemist & Plant Analysis Lead, Agrivida, Inc.

111. Analysis of Muscle Stem Cell Programming
Alexander Lawton, Molecular and Cell Biology
Advisor: David Goldhamer, Professor, Molecular and Cell Biology
Advisor: Masakazu Yamamoto, Assistant Research Professor, Molecular and Cell Biology

112. Biochemical Analysis of the New Actin Assembly Factor WHIMP
Margaret Zimmer, Biological Sciences
Advisor: Kenneth Campellone, Assistant Professor, Molecular and Cell Biology

113. Exploring the Role of the Cytoskeleton in Neurodegenerative Disease
Isabel Nip, Molecular and Cell Biology
Advisor: Kenneth Campellone, Assistant Professor, Molecular and Cell Biology

114. Effects of Estrogen on Early Male Gonadal Development
Robert Stickels, Molecular and Cell Biology
Advisor: Rachel O'Neill, Professor, Molecular and Cell Biology

115. Role of Symbiotic Bacteria in Embryogenesis of *Euprymna scolopes*
Greg Thomson, Molecular and Cell Biology
Advisor: Spencer Nyholm, Associate Professor, Molecular and Cell Biology

116. Allele Specific Expression in Fish of the Poeciliidae Family
Lauren Almonte, Molecular and Cell Biology
Advisor: Michael O'Neill, Associate Professor, Molecular and Cell Biology

117. The Initial Effects of the Patient Protection and Affordable Care Act on Pediatric Emergency Departments
Bryan Swenson, Molecular and Cell Biology
Advisor: Arlene Albert, Professor, Molecular and Cell Biology
Advisor: Sharon Smith, M.D., Emergency Department, CT Children's

118. Predictability of an ED-Screening Tool for Future Exposure to Violence
Christopher Mashiak, Molecular and Cell Biology
Advisor: Arlene Albert, Professor, Molecular and Cell Biology
Advisor: Sharon Smith, M.D., Emergency Department, CT Children's

119. Assessing Childhood Obesity Risk Through Parental Diet and Location of Residence
Yue Lin, Molecular and Cell Biology
Advisor: Arlene Albert, Professor, Molecular and Cell Biology
Advisor: Sharon Smith, M.D., Emergency Department, CT Children's

120. Neuroanatomical Characterization of Transgenic Mouse Lines for the Study of the Hypothalamic Histaminergic System
Miryam Wilson, Physiology and Neurobiology
Advisor: Alexander Jackson, Assistant Professor, Physiology and Neurobiology

College of Agriculture, Health and Natural Resources

121. No Difference Between ACL Reconstruction Graft Types on Dynamic Balance and Knee Function
Lisa Dolan, Athletic Training
Advisor: Lindsay DiStefano, Assistant Professor, Kinesiology

122. Influence of Sport Specialization on Landing Technique in Youth Soccer Athletes
Nicole Taranto, Athletic Training
Advisor: Lindsay DiStefano, Assistant Professor, Kinesiology

College of Liberal Arts and Sciences

123. Exploring the Influence of Metallothionein on Immune Cell Proliferation
Lauren Weaver, Molecular and Cell Biology
Advisor: Michael Lynes, Professor and Department Head, Molecular and Cell Biology

124F. PLGA microsphere/PVA hydrogel Composites for Biosensor Coating against Inflammation using Microdyalisis Probes as Surrogates.
Klair Lubonja, Molecular and Cell Biology
Advisor: Diane Burgess, Distinguished Professor, Pharmaceutical Sciences
Advisor: Michael Lynes, Professor and Department Head, Molecular and Cell Biology

124S. Probing pH-dependent Acitivity of a Viral Lytic Peptide
Michael Ward, Biological Sciences
Advisor: Eric May, Assistant Professor, Molecular and Cell Biology

125. The Role of the Extracellular Matrix on Nanoparticle Adhesion to Ovarian Cancer Cells
Brian Liang, Molecular and Cell Biology
Advisor: Xiuling Lu, Assistant Professor, Pharmaceutical Sciences

126F. A Study of Bacteriorhodopsin Structure, Function, and Mutagenesis for Application in an Artificial Retinal Implant
Maschal Mohiuddin, Biology
Advisor: Robert Birge, Professor, Chemistry

126S. Studying the Role of RNA Transcripts at Centromeres in Drosophila
Patrick Lenehan, Molecular and Cell Biology
Advisor: Barbara Mellone, Assistant Professor, Molecular and Cell Biology

127. Effects of Mutants in the I-domain on Bacteriophage P22 Coat Protein Stability and Mature Capsid Structure
Fejiro Okifo, Biological Sciences
Advisor: Carol Teschke, Professor, Molecular and Cell Biology

128. What is the Cellular Basis of the Defect in Development in Dictyostelium Cells Lacking Three Actin Cross Linking Proteins?
Riddhi Thaker, Molecular and Cell Biology
Advisor: David Knecht, Professor, Molecular and Cell Biology

129F. Inference of Cell Lineages in the 8.5dpc Mouse Embryo
Steven Burger, Molecular and Cell Biology
Advisor: Craig Nelson, Associate Professor, Molecular and Cell Biology

129S. Characterization of AK301, a Novel Microtubule Binding Agent
Michael Bond, Molecular and Cell Biology
Advisor: Charles Giardina, Professor, Molecular and Cell Biology
Advisor: Amy Anderson, Professor and Acting Department Head, Pharmaceutical Sciences

130. Investigation of the Lipid Dependence of Respiratory Complex IV Activation using Nanoscale Bilayers
Matthew Greenwood, Molecular and Cell Biology
Advisor: Nathan Alder, Associate Professor, Molecular and Cell Biology

131. Construction of Single Unit Recording Microdrive
Stephanie Vu, Physiology and Neurobiology
Advisor: Etan Markus, Professor, Psychology

132. Comparison of Spatial Learning in a Water Maze in the Presence and Absence of Visual Information
Sarthak Patel, Physiology and Neurobiology
Yezmin Crespo-Adorno, Physiology and Neurobiology
Ashlesha Dhuri, Cognitive Science
Megan Pattoli, Pathobiology
Dana Lew, Physiology and Neurobiology
Advisor: Etan Markus, Professor, Psychology

133. Analysis of Theta Waves in Dorsal and Ventral Hippocampus During Acquisition of a Place and Response Task in a Rat
Xiao Li, Physiology and Neurobiology
David Katz, Physiology and Neurobiology and Psychology
Advisor: Etan Markus, Professor, Psychology

134. Teaching Rats When to Go Where: A Study of Temporal Sequencing and Episodic Memory
Kaylene King, Physiology and Neurobiology
Anne Rathey, Psychology
Kavya Katugam, Physiology and Neurobiology and Psychology
Aditi Agrawal, Biology
Nikita Roy, Physiology and Neurobiology
Advisor: Etan Markus, Professor, Psychology

135. Age and Behavioral Experience Modulate Parvalbumin in Naive and Chronically-Ketamine Treated Rats: Evidence for Dynamic Protein Expression
Kevin Keary, Physiology and Neurobiology
Vanessa Kania, Physiology and Neurobiology
Mariamma Chaluparambil, Molecular and Cell Biology
Advisor: James Chrobak, Professor and Associate Department Head, Psychology

136. **Assessing Regional Differences of PDGF/PDGFRα in Gray Matter and White Matter**
Vivian Yang, Molecular and Cell Biology
Advisor: Akiko Nishiyama, Professor, Physiology and Neurobiology

137. Mouse Models of Repeated Concussions Cause Region-Specific Cellular Changes
Mai Stern, Physiology and Neurobiology
Melanie Soloway, Physiology and Neurobiology
Richard Wolferz, Jr., Biological Sciences
Advisor: Joanne Conover, Associate Professor, Physiology and Neurobiology
Advisor: Donald Kuhn, Professor, Department of Psychiatry & Behavioral Neurosciences, Wayne State University

138. Can Average and First Choice Latency Be Used to Predict a Rats Performance in a Temporal Sequence Task?
Michael Bowe, Physiology and Neurobiology
Advisor: Etan Markus, Professor, Psychology

139. Ongoing and Evoked EEG Activity During a Passive P300 Spelling Task
Shreevidya Periyasamy Shanmugavel Gurubaran, Biological Sciences
Advisor: Ian Stevenson, Assistant Professor, Psychology

140. Relating Activity Levels with Learning in Rats
Victoria Wickenheisser, Physiology and Neurobiology
Advisor: Etan Markus, Professor, Psychology

141. Behavioral Outcomes of Hypothermia Therapy As an Intervention for Premature Hypoxic-Ischemic Injury In a Rodent Model
Haley Garbus, Psychology
Advisor: R. Holly Fitch, Professor, Psychology

College of Agriculture, Health and Natural Resources

142. Behavioral Assessment of Repetitive Mild Traumatic Brain Injury in Mice as a Function of Genetic Variation
Kaitlin O'Connell, Allied Health Science
Advisor: R. Holly Fitch, Professor, Psychology

College of Liberal Arts and Sciences

143. Striatal Morphology in a Rat Model of Premature Brain Injury and Associated Attention Deficit
Natana Mann, Physiology and Neurobiology
Advisor: R. Holly Fitch, Professor, Psychology

144F. Human Conditioned Place Preference Using Secondary Reinforcers
Franchesca Kuhney, Psychology
Advisor: Robert Astur, Associate Professor, Psychology

College of Agriculture, Health and Natural Resources

144S. Human Conditioned Place Preference Using a Secondary Reinforcer
Lauren Masayda, Allied Health Sciences
Advisor: Robert Astur, Associate Professor, Psychology

145. Using Mouse Histone Data to Organize Chicken Histone Isotypes and Examine their Expression throughout Development
Laura Dellalana, Biological Sciences
Advisor: Rahul Kanadia, Assistant Professor, Physiology and Neurobiology

146. Investigation of the Effects on In-Utero Electroporation on the Expression of Important GABA-Synaptic Proteins
Sean Dinallo, Physiology and Neurobiology
Advisor: Angel de Blas, Professor, Physiology and Neurobiology

147. Discrimination of Temporal Cues by Rats in Sound Sequences
Deric Zhang, Physiology and Neurobiology
Advisor: Heather Read, Associate Professor, Psychology

School of Engineering

148. Developing Filtering for Artifact Removal in Neural Stimulation
Kelsey Dutta, Electrical Engineering and Physiology and Neurobiology
Advisor: Heather Reed, Associate Professor, Psychology
Advisor: Monty Escabi, Associate Professor, Electrical and Computer Engineering

149. Cortical Neural Coding of Discrimination of Temporal Cues in Sound
Richard Lin, Biomedical Engineering
Advisor: Heather Reed, Associate Professor, Psychology

College of Liberal Arts and Sciences

150. Stimulation in Inferior Colliculus for Improved Auditory Midbrain Implant
Linette Duluc, Biology
Advisor: Heather Read, Associate Professor, Psychology
Advisor: Monty Escabi, Associate Professor, Electrical and Computer Engineering

151. A KCNQ3 Gain of Function Mutation in a Patient with Infantile Spasms
Aaliyah Riccardi, Biological Sciences
Advisor: Anastasios Tzingounis, Associate Professor, Physiology and Neurobiology

152F. The Ability of Dopamine Uptake Inhibitor GBR12909 to Improve Lever Pressing Performance on a Progressive Ratio/Chow Feeding Choice Task: Implications for Research on Depression
Bridget Wilson, Psychology
Advisor: John Salamone, Distinguished Professor, Psychology

152S. Relationships between LFP Ripples and Place Field Replay in Rat Hippocampus
Pranav Singla, Physiology and Neurobiology
Advisor: Ian Stevenson, Assistant Professor, Psychology

153F. Fluoxetine Administration Exacerbates Tetrabenazine-Induced Parkinsonism in Rats: Effects of Coadministration of the 5-HT2a/c Antagonist Mianserin
Tiahna Spencer, Physiology and Neurobiology
Advisor: John Salamone, Distinguished Professor, Psychology

153S. Hypolipidemic and Anti-Inflammatory Effects of the Microalga Spirulina platensis
Georgette Appiah-Pippim, Physiology and Neurobiology
Advisor: Marcy Balunas, Assistant Professor, Pharmaceutical Sciences
Advisor: Ji-Young Lee, Associate Professor, Nutritional Sciences

154. Assessing the NMDA Antagonist Ketamine on Effort-Related Choice Behavior: Rodent Models of Depression
Celia Guillard, Neuroscience
Advisor: John Salamone, Distinguished Professor, Psychology

155F. The Effects of Norepinephrine on the Motivational Aspects of Depression
Kristin Tokarski, Physiology and Neurobiology
Advisor: John Salamone, Distinguished Professor, Psychology

155S. The Effects of Lactate on the Counterregulatory Response to Hypoglycemia in Type 1 Diabetes
Kristin Tokarski, Physiology and Neurobiology
Advisor: Owen Chan, Assistant Professor of Medicine (Endocrinology), Yale School of Medicine

156. Oscillatory Activity In The Subthalamic Nucleus and Motor Cortex In A Pharmacological Rodent Model of Parkinsonian Tremor
Aileen Haque, Physiology and Neurobiology
Advisor: John Salamone, Distinguished Professor, Psychology

157. Neurochemical and Motivational Effects of the Dopamine Uptake Inhibitor GBR 12909: Implications for Depression
Emily Errante, Psychology
Advisor: John Salamone, Distinguished Professor, Psychology

158F. Pharmacological Characterization of Drugs that Alter Effort-Related Choice Behavior in Animal Models of Depression
Margaret “Megan” Rowland, Psychology
Advisor: John Salamone, Distinguished Professor, Psychology

158S. Minding Your Morals: Examining Ethical Decision-Making in Pharmacotherapy by Mental Healthcare Professionals
Margaret “Megan” Rowland, Psychology
Advisor: Dominic Sisti, Assistant Professor, Medical Ethics and Health Policy, Perelman School of Medicine, University of Pennsylvania

159. Discovering the Sequence Specificity of Human and Viral Protein Kinases
Julie Klaric, Biological Sciences
Advisor: Daniel Schwartz, Assistant Professor, Physiology and Neurobiology

160. Assessing Patterns of Neuronal Activity in Neocortex by Mesoscopic Imaging
Bingyao Zhou, Physiology and Neurobiology
Advisor: Joseph LoTurco, Professor, Physiology and Neurobiology

College of Agriculture, Health and Natural Resources

161. Characterization of Novel Synthetic Vaccinia Virus Promoters
Kewa Jiang, Molecular and Cell Biology
Advisor: Paulo Verardi, Associate Professor, Pathobiology and Veterinary Science

162. Recombinase-Based Logical Circuits for Vaccinia Virus Vectors
Peter Larson, Pathobiology and Molecular and Cell Biology
Advisor: Paulo Verardi, Associate Professor, Pathobiology and Veterinary Science

163F. The Effects of L-DOPA on Angiogenesis
Claire Price, Pathobiology
Advisor: Diane Burgess, Distinguished Professor, Pharmaceutical Sciences

163S. Sugars and Citric Acid Differently Modulate DPPH Antioxidant Activity in Polyphenol-rich Fruit Juices
Sarah Kranz, Dietetics
Advisor: Bradley Bolling, Assistant Professor, Food Science, University of Wisconsin-Madison

164F. Diet and Colon Cancer: Connecting Basic Science with Clinical Research
Gretchen Egan, Allied Health Sciences
Advisor: Valerie Duffy, Professor, Allied Health Sciences

164S. Associations Between Healthy Eating Index, Adiposity, and Cardiovascular Disease Risk Factors
Matt Greene, Dietetics
Frankie Maderia, Dietetics
Advisor: Valerie Duffy, Professor, Allied Health Sciences

165. Discovering an AMPK-UCP5 Link in Neuroprotective Effects in Dopaminergic Neurons Under Oxidative Stress
Yamini Chalikonda, Allied Health Sciences
Advisor: Yih-Woei Fridell, Assistant Professor, Allied Health Sciences

College of Liberal Arts and Sciences

166. Transposon Mediated Activation Tagging in M. lewisii
Dominika Bajguz, Molecular and Cell Biology
Henry Guo, Biological Sciences
Advisor: Yaowu Yuan, Assistant Professor, Ecology and Evolutionary Biology

167. Exploring Species Composition of Plant Diaspores Found in the Feathers of Amphitropical / Migratory Shorebirds
Emily Behling, Biological Sciences
Advisor: Bernard Goffinet, Professor, Ecology and Evolutionary Biology

168F. Gene Expression of Gill Ion Transporters in the Threespine Stickleback When Exposed to Salinity Challenges
Zachary Skelton, Biological Sciences
Advisor: Eric Schultz, Professor, Ecology and Evoluntionary Biology

College of Agriculture, Health and Natural Resources

168S. Use of Fruiting Plants by Overwintering Frugivorous Birds
Aaron Mueller, Ecology and Evolutionary Biology
Advisor: Chris Elphick, Associate Professor, Ecology and Evolutionary Biology

169F. Investigating the Evolutionary Gain and Loss of Na+, K+ - ATPase "isoform switching" in a Euryhaline Fish, the Alewife
Rebecca Colby, Ecology and Evolutionary Biology
Advisor: Eric Schultz, Professor, Ecology and Evolutionary Biology

College of Liberal Arts and Sciences

169S. Effects of Nutrients and Alarm Cues in Toxin Production of Marine Dinoflagellate Alexandrium fundyense
Jessica Griffin, Environmental Science
Advisor: Hans Dam, Professor, Marine Sciences

170. Novel Covalent Labeling of Protein by Squaraine Dyes
Divya Iyer, Structural Biology & Biophysics
Advisor: Challa Kumar, Professor, Chemistry

College of Agriculture, Health and Natural Resources

171F. Assay Development and Validation of Borrelia miyamotoi
Emma Price, Animal Science and Pathobiology
Advisor: Sandra Bushmich, Professor, Pathobiology and Veterinary Science

171S. Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) Envelope Glycoproteins and Innate Immune Responses
Emily Morse, Pathobiology
Advisor: Antonio Garmendia, Professor, Pathobiology and Veterinary Science

172. Correlating Histology, Microbiology, and Ultrasound Imaging for Detecting Mastitis in Dairy Cattle
Julie Notestine, Animal Science
Advisor: Sheila Andrew, Associate Professor, Animal Science
Advisor: Kirklyn Kerr, Professor, Pathobiology and Veterinary Science

173. Evaluating the Effect of Maternal Colostrum Quality, Dystocia, and Health on Calf Vitality
Clarissa Spadanuta, Animal Science
Travis Corbelle, Animal Science
Advisor: Sheila Andrew, Associate Professor, Animal Science

174. Effects of Plant-derived Compounds on Staphylococcus aureus Infection of Primary Bovine Mammary Epithelial Cells
Ellen Valley, Animal Science
Advisor: Kristen Govoni, Assistant Professor, Animal Science
Advisor: Kumar Venkitanarayanan, Professor, Animal Science

175. Interleukin-6, Tumor necrosis factor-**α, Insulin**-like growth factor-1 and Fibroblast growth factor-2 Alter Proliferation and Differentiation of Equine Satellite Cells
Emma LaVigne, Animal Science and Pathobiology
Advisor: Sarah Reed, Assistant Professor, Animal Science

176F. The Effects of Soil Moisture and Vegetation on Carbon Emissions From Wetlands
Emily McInerney, Natural Resources
Advisor: Ashley Helton, Assistant Professor, Natural Resources and the Environment

176S. Relationships between Longissimus Dorsi Muscle Size and Age, Breed, and Body Condition of the Horse
Delaney Patterson, Animal Science
Allison Schauer, Animal Science
Emma LaVigne, Animal Science and Pathobiology
Advisor: Sarah Reed, Assistant Professor, Animal Science

Alphabetical Listing of Presenters with Poster Numbers

Special Thanks

The Office of Undergraduate Research wishes to thank the deans of the represented schools and colleges, the Provost's office, and the generous donors to the Honors Program for their support of undergraduate research through contributions to the Summer Undergraduate Research Fund and OUR grant programs. In addition, we thank the following individuals for their support:

Susan Herbst, *President, University of Connecticut*

Mun Choi, *Provost and Executive Vice President for Academic Affairs*

Sally Reis, *Vice Provost for Academic Affairs*

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

Cheryl Cranick, *Communications, Honors Program*

Student Volunteers from the Honors Program

Office of Undergraduate Research Staff

Caroline McGuire*, Director, Office of Undergraduate Research*

Melissa Berkey, *Program Coordinator, UConn IDEA Grant Program, Office of Undergraduate Research*

Jodi Eskin, *Program Specialist, Office of Undergraduate Research*

Wilbur Cross Building