COLLEGE OF LIFE SCIENCES AND AGRICULTURE

24th ANNUAL UNDERGRADUATE RESEARCH CONFERENCE

Memorial Union Building
Granite State Room and Theatre II
April 25, 2015
7:45 am – 12:45 pm

University of New Hampshire
CONFERENCE PROGRAM

7:45 - 8:15 a.m.  REGISTRATION
(Theater II, Memorial Union Building)

Please enjoy beverages and a light breakfast.

8:15 - 8:30 a.m.  WELCOME
(Theater II, Memorial Union Building)

Subhash Minocha  Conference Chair
Lisa MacFarlane  Provost and Vice President for Academic Affairs
Jon Wraith  Dean of the College of Life Sciences & Agriculture

9:30 - 9:45 a.m.  BREAK

8:30-10:30 a.m.  Session I:  ORAL PRESENTATIONS
(Theater II, Memorial Union Building)

1. Effects of Age, Density, and Seasonality on Molt Pattern in the Mammal Genus Peromyscus
   Rebecca C. Graves
   Major: Zoology
   Ryan B. Stephens
   Adviser: Rebecca Rowe

2. Effects of Audible Human Disturbance on Koala (Phascolarctos cinereus) Behaviour in Queensland, Australia and Implications for Management
   Galina E. Kinsella
   Major: Biomedical Science
   Advisers: Andrew Conroy, Leslie Curren, Alistair Melzer

3. A Proto-Pluritropic Cell Type and its Expression of Novel Glycoprotein Hormones in the Pituitary of the Basal Vertebrate, the Sea Lamprey
   Timothy J. Marquis
   Major: Biomedical Science
   Adviser: Stacia Sower

4. Waste Water Treatment in New Hampshire
   Jessica I. Kaczynski
   Major: Environmental and Resource Economics
   Adviser: John Halstead

5. The Relationship Between Kinship and Physical Proximity in Captive Primates
   Tricia A. Gunther
   Major: Wildlife and Conservation Biology
   Adviser: Leslie Curren

6. Effects of Fetal Alcohol Spectrum Disorder on Distractibility and Attention
   Michael B. Workman
   Major: Biomedical Science
   Adviser: Jill McGaughy
Session II:

POSTER PRESENTATIONS
(Granite State Room, MUB)

10:45-11:45 a.m. Even-numbered posters
11:45 a.m.-12:45 p.m. Odd-numbered posters

1. Effects of Audible Human Disturbance on Koala (Phascolarctos cinereus) Behaviour in Queensland, Australia and Implications for Management
   Galina E. Kinsella
   Major: Biomedical Science
   Advisers: Andrew Conroy, Leslie Curren, Alistair Melzer

2. Implications of New England Cottontail Habitat Management on the Metapopulation Dynamics of Declining Shrub-Dependent Songbirds – A Pilot Study
   Randy Shoe
   Erin D. Smith
   Major: Wildlife and Conservation Biology
   Adviser: Matthew Tarr

3. Effects of Exercise on Intermittent Swim Stress-induced Ultrasonic Vocalizations and Subsequent Behavioral Depression
   India C. Stribling
   Major: Neuroscience and Behavior
   Nathaniel P. Stafford
   Adviser: Robert Drugan

4. Effects of Bugling on Roosevelt Elk (Cervus canadensis roosevelti) Vigilance
   Sarah D. Geromini
   Major: Zoology
   Abigail M. Desrosiers
   Major: Biomedical Science
   Allison C. Duquette
   Major: Biology
   Anastasia Zielinski
   Major: Zoology
   Adviser: Leslie Curren

5. Effects of Fetal Alcohol Spectrum Disorder on Distractibility and Attention
   Michael B. Workman
   Major: Biomedical Science
   Adviser: Jill McGaughy

6. Veteran Transition Assistance Program
   Coty R. Winn
   Major: Biomedical Science
   Adviser: Bryan Ness

7. A Revision of the Ant-like Litter Beetle Genus Custotychus (Coleoptera: Staphylinidae: Pselaphinae)
   Sarah D. Geromini
   Major: Zoology
   Adviser: Donald Chandler

8. Does Stage of Change Mediate the Impact of a Motivator to Increase Activity Levels Among College Students?
   Jordan L. Badger
   Major: Nutrition
   Mathew J. Biondolillo
   Advisers: Summer Cook, David Pillemeter, Jesse Morrell

9. How Does Inaccurate Perception of Weight Compared to Actual BMI Status Affect the Diet Score of College Students?
   Jaclyn I. Querido
   Major: Nutrition
   Adviser: Jesse Morrell

10. Early Sleep Midpoints are Associated with Increased Fruit, Water, and Fiber Intakes and Decreased Discretionary Calories in a Young Adult Cohort
    Amy L. Parker
    Major: Nutrition
    Adviser: Jesse Morrell

11. Food Insecurity Among Undergraduate Students
    Alana R. Davidson
    Major: Nutrition
    Adviser: Jesse Morrell
12. Atmospheric Nuclear Weapon Testing Horizons: Establishing Depth-Age Relationships in an Alaskan Ice Core  
Megan E. Dalton  
Major: Environmental Sciences  
Adviser: Cameron Wake

13. Investigating Alternative Pest Management Strategies for 'Cabbage Maggot' Delia radicum on Radishes  
Waylin J. Clegg  
Major: Sustainable Agriculture and Food Systems  
Adviser: Richard Smith

Katherine A. Cart  
Major: Biology  
Adviser: Jonathan Pennock

15. Microanalysis of Photo-active Gradients in the Colonial Cyanobacteria Nostoc using Fiber-optic Probe Technology  
Bregieta N. Arvidson  
Major: Marine, Estuarine and Freshwater Biology  
Adviser: Alan Baker

16. Effects of Nanoparticles and Polymers on Gene Transfer  
Steven P. Troy  
Major: Biochemistry, Molecular and Cellular Biology  
Adviser: Subhash Minocha

17. Genetic Identification of Host Species from Bloodmeals of Black-Legged Ticks  
Stephanie E. Royka  
Major: Genetics  
Adviser: Adrienne Kovach

18. Growth Rate of Calcium-Fertilized Sugar Maple and Yellow Birch Trees at Hubbard Brook  
Stacie L. Powers  
Major: Environmental Conservation Studies  
Advisers: Matthew Vadeboncoeur, Heidi Asbjornsen

19. Searching for Sex Determination Markers in Cold Hardy Kiwi (Actinidia arguta) via RAPD PCR  
Caitlin E. Culver  
Major: Genetics  
Adviser: Iago Hale

20. Investigating Non-Transcriptional Apoptosis in Severely Stressed Human Acute Myelogenous Leukemia Cells through Blockage of p53 Nuclear Import  
Kelsie N. Schanlaber  
Major: Biochemistry, Molecular and Cellular Biology  
Adviser: Charles Walker

21. Culinary Assessment of Sweet Potato Varieties  
Kelsey M. MacDonald  
Major: Nutrition and Ecogastronomy  
Advisers: Rebecca Sideman, Daniel Winans, Joanne Curran-Celentano

22. An Investigation of the Potential Impacts of Invasive Green and Blue Crabs on the American Lobster Fishery in the Great Bay Estuary  
Erika D. Moretti  
Major: Zoology  
Adviser: Winsor Watson

23. The Impact of Feeding on Horse-shoe Crab Activity  
Erin E. Ducharme  
Major: Marine, Estuarine and Freshwater Biology  
Adviser: Winsor Watson

Ashton B. Parker  
Major: Sustainable Agriculture and Food Systems  
Adviser: Andrew Conroy

25. Isolation and Analysis of Glycolipids, N-linked Glycans, and O-linked Glycans from a Single Sample of Human Serum  
Seth J. Burgess  
Ashley R. Medeiros  
Major: Biochemistry, Molecular and Cellular Biology  
Advisers: David Ashline, Vernon Reinhold
26. A Proto-Pluritropic Cell Type and its Expression of Novel Glycoprotein Hormones in the Pituitary of the Basal Vertebrate, the Sea Lamprey  
Timothy J. Marquis  
Major: Biomedical Science  
Adviser: Stacia Sower

27. Tracing The Metabolism of 13C-labeled Amino Acids and Glucose in Fungal Cultures  
Megan M. Grass  
Major: Biomedical Science  
Advisers: Andrew Ouimette, Erik Hobbie

28. Stress Reactivity and Depressive-like Behavior Following Long Versus Short Acclimation Period in Rats Exposed to Intermittent Swim Stress or Home Cage Control  
Kristina Spencer  
Major: Neuroscience and Behavior  
Nathaniel P. Stafford  
Adviser: Robert Drugan

29. The Effects of Polybrominated Diphenyl Ether (PBDE) Dose on Hepatic Phosphoenolpyruvate carboxykinase (PEPCK) Enzyme Activity in Rats  
Joshua J. Evans  
Major: Biomedical Science  
Adviser: Gale Carey

30. SKBR-3 Breast Cancer Cells Display Increased Proliferation When Treated with Calcium Ionophore A23187  
Amanpreet Kaur  
Major: Biochemistry, Molecular and Cellular Biology  
Dina K. El-Tahlawy  
Adviser: Charles Walker

31. Chicken Coops and Rice Paddies: Experiencing Panama Through Global Brigades  
Elaina M. Enzien  
Major: Sustainable Agriculture and Food Systems  
Adviser: Andrew Conroy

32. Truffle Abundance and Mycophagy by Small Mammals in Northern New England Forests  
Tyler J. Remick  
Major: Wildlife and Conservation Biology  
Ryan B. Stephens  
Adviser: Rebecca Rowe

33. Do Diets of Woodland Jumping Mice and Southern Red-Backed Voles Differ Across Forest Types?  
Jonathan P. Nowick  
Major: Environmental Sciences  
Ryan B. Stephens  
Advisers: Rebecca Rowe, Erik Hobbie

34. Variation in Truffle Consumption by Myodes gapperi Between Managed and Unmanaged Forests in Northern New Hampshire  
Andrew J. Uccello  
Major: Biology  
Ryan Stephens  
Adviser: Rebecca Rowe

35. Can Tropical Teak Plantations be Managed Sustainably for Both Timber and Water? An Experimental Thinning Study in Panama  
Connor R. Breton  
Major: Environmental Sciences  
Katherine A. Sinacore  
Advisers: Jefferson Hall, Heidi Asbjornsen

36. Carbon Fluxes Across Four Land Use Types in New Hampshire  
Sean Z. Fogarty  
Major: Sustainable Agriculture and Food Systems  
Advisers: Andrew Ouimette, Lucie Lepine

37. Presence of β-N-Methylamino-L-alanine in Sediment and Plankton Samples from New Hampshire Lakes  
Anna H. Alexandrou  
Benjamin D. Gallo  
Major: Marine, Estuarine and Freshwater Biology  
Advisers: Amanda Murby, James Haney
38. Presence of the Hepatotoxic Microcystins in Vaccinium spp. in New Hampshire Lakes  
Anna H. Alexandrou  
Major: Marine, Estuarine and Freshwater Biology  
Jessica C. Eisfeller  
Major: Biochemistry, Molecular and Cellular Biology  
Advisers: Amanda Murby, James Haney

39. Below Ground Root Growth in Relation to Soil Nutrient Availability  
Kelley A. Lieto  
Major: Environmental Sciences  
Advisers: Lucie Lepine, Andrew Ouiimet

40. Investigating Failed Loon Eggs: A Model for Bioaccumulation in Lake Ecosystems  
Lydia A. Birch  
Major: Biomedical Science  
Kara J. Foley  
Major: Environmental Science  
Advisers: Amanda Murby, James Haney

41. Ecological and evolutionary implications of maternal investment in a small carpenter bee  
Krista N. Ciaccio  
Major: Biology  
Adviser: Sandra Rehan

42. Comparison of Multiple Methods Used to Estimate Foliar Production and Canopy Composition of a Forest  
Jacob R. DeBow  
Major: Wildlife and Conservation Biology  
Advisers: Lucie Lepine, Andrew Ouiimet

43. Detection of Cyanotoxins from Feathers of Common Loon Chicks with Implications for Measuring Bioaccumulation of Cyanotoxins from Lakes  
Stephanie L. Allaire  
Kelly A. Mitchell  
Major: Biology  
Advisor: James Haney

44. Toxic Time Lines Told by Trees  
Renee A. Loeffel  
Major: Zoology  
Jessica M. O’Toole  
Haley E. Millen  
Major: Marine, Estuarine and Freshwater Biology  
Advisor: James Haney

45. The Influence of Extracellular Regulated Kinases (ERKs) on Granulosa Cell Fate in the Bovine Follicle  
Nicolette M. Schwab  
Major: Biomedical Science  
Andraya L. Ehrlich  
Major: Biology  
Sarah A. Piet  
Major: Biochemistry, Molecular and Cellular Biology  
Adviser: David Townsend

46. Aerosolized Cyanotoxins from New England Dams  
Alexis F. Mack  
Major: Chemical Engineering  
Stephanie L. Sykes  
Major: Marine, Estuarine and Freshwater Biology  
Advisers: Amanda Murby, James Haney

47. Isotopic Analyses of Post-fire Fungi Indicate that Morchella is Saprotrrophic  
Samuel F. Rice  
Major: Environmental Conservation Studies  
Advisers: Erik Hobbie, Stephen Macko, Jane Smith

48. Comparative social evolution in the Australian small carpenter bee  
Sean S. Lombard  
Major: Biomedical Science  
Adviser: Sandra Rehan

49. The implications of Brain oscillations on the relationship between source memory and MAO-A gene variations  
David C. G. Wigemark  
Major: Neuroscience and Behavior  
Adviser: Robert Ross
50. New Hampshire Dairy Farm Succession: Conversations about Strategies and Challenges of Preserving the Family Farm
   Emma Downing
   Major: Sustainable Agriculture and Food Systems
   Advisers: Catherine Moran, Andrew Conroy

51. Loon Chick Blood as a Bioindicator of Cyanotoxins
   Lisa T. Doyle
   Major: Biology
   Enrica L. Jossi
   Benjamin D. Gallo
   Major: Marine, Estuarine and Freshwater Biology
   Advisers: Amanda Murby, James Haney

52. Multi-level Comparison of CGI Distribution Across Thirty-Six Animal Genomes
   Christopher R. Carroll
   Major: Genetics
   Lindsay A. Havens
   Lauren L. Kordonowy
   Kaelina D. Lombardo
   Major: Genetics
   Advisers: David Plachetzki, Matthew Macmanes

53. Complex Encoding of Information About Actions and Context in Rat Prefrontal Cortex in Correlation with Cell Width
   Austin G. Drake
   Theodore N. Kazan
   Cora R. Lehet
   Hayley D. Robertson
   Major: Neuroscience and Behavior
   Advisers: Brett Gibson, Robert Mair

54. Identification and Characterization of Genes Involved in Root Growth Under Salt Stress in Arabidopsis
   Lisa L. Flaman
   Nicole M. Petersen
   Major: Biochemistry, Molecular and Cellular Biology
   Melissa E. Ryan
   Major: Genetics
   Megan M. Thompson
   Adviser: Estelle Hrabak

55. Encoding of Information About Actions and Context in Rat Prefrontal Cortex: Effects of Thalamic Inactivation
   Emily S. Jalbert
   Major: Psychology and Neuroscience and Behavior
   Joseph C. McKee
   Major: Neuroscience and Behavior
   Cassandra E. Wante
   Major: Psychology
   Advisers: Robert Mair, Brett Gibson

56. Identification of Palmitoyltransferase Loss-of-Function Mutants in Arabidopsis thaliana
   Judith G. Hoskin
   Thomas E. DuBois
   Major: Genetics
   Adviser: Estelle Hrabak

57. Encoding of Information About Action and Context by Medial thalamus in the Rat
   Adam C. Aasen
   Major: Neuroscience and Behavior
   Kaleigh C. Erickson
   Major: Marine, Estuarine and Freshwater Biology
   Daniel Minukhin
   Elizabeth B. Smedley
   Major: Neuroscience and Behavior
   Advisers: Robert Mair, Brett Gibson

58. The Influence of OmniGen AF on Immune Cell Accumulation, Ovulation Rate and Fertility in the Female Rat
   Keshav Nepal
   Major: Biomedical Science
   Adviser: David Townson

59. Encoding of Information About Actions and Outcomes by Medial thalamus in the Rat
   Elizabeth B. Smedley
   Major: Neuroscience and Behavior
   Rikki L. A. Miller
   Advisers: Robert Mair, Brett Gibson

60. The MinION: A Miniaturized DNA/RNA Sequencer
   Jennifer A. Dickson
   Major: Biomedical Science
   Adviser: Matthew Macmanes
61. Characterizing the Angiogenic Properties of Brain Cancer Cells Using the Glioma U-373 Cell Line
   Tien T. Dang
   Major: Biomedical Science
   Adviser: Paul Tsang

62. Norepinephrine and the Attentional Set Shifting Task in a Rat Model of Fetal Alcohol Spectrum Disorder
   Elizabeth A. Kern
   Major: Neuroscience and Behavior
   Adviser: Jill McGaughy

63. A Comparative Quantitative Study of Anatomical Homogeneity Between the Distal and Proximal Regions of a Sunflower Leaf
   Hillary M. Manning
   Major: Biomedical Science
   Adviser: Wayne Fagerberg

64. Timeline of Phenotypic Development in the Asian Multicolored Lady Beetle (Harmonia axyridis)
   Lindsay A. Havens
   Kaelina D. Lombardo
   Major: Genetics
   Adviser: Matthew Macmanes

65. Toxic Cyanobacteria Aerosols: Tests of Filters for Cells and Toxins
   Sean R. Perry
   Alexis F. Mack
   Major: Chemical Engineering
   Advisers: Amanda Murby, James Haney

66. The Identification of Palmitoyltransferase Mutants in Arabidopsis thaliana
   Thomas E. DuBois
   Major: Genetics
   Adviser: Estelle Hrabak

67. Feeding and Satiation of Melibe leonina
   Corey T. Collins
   Major: Neuroscience and Behavior
   Colin Lee
   Adviser: Winsor Watson

68. The Effect of Plant Nodulation on Cu2+ Tolerance by Hippophae rhamnoides
   Evan J. Carignan
   Major: Environmental Sciences
   Adviser: Louis Tisa

69. Does Being Alone Induce Stress in Domestic Dogs (Canis lupus familiaris)?
   Allison A. Scagel
   Major: Wildlife and Conservation Biology
   Adviser: Leslie Curren

70. Regulation of the Surfactant Serratia rawettin W2 in Serratia sp. Strain SCBI
   Rebecca E. Audette
   Major: Biomedical Science
   Tyler J. Koloski
   Adviser: Louis Tisa

71. Evaluating the Role of Private Lands in the Conservation of Biodiversity
   Hannah A. Whalen
   Major: Environmental Conservation Studies and International Affairs
   Advisers: Jennifer Purrenhage, Kimberly Babbitt

72. Evaluating Genetic Diversity Between Populations of New England Cottontail (Sylvilagus transitionalis) and Eastern Cottontail (Sylvilagus floridanus)
   Tricia A. Gunther
   Major: Wildlife and Conservation Biology
   Thea Kristensen
   Major: Ecology, Evolution and Behavior
   Katrina Papanastassiou
   Adviser: Adrienne Kovach

73. The Relationship Between Kinship and Physical Proximity in Captive Primates
   Tricia A. Gunther
   Major: Wildlife and Conservation Biology
   Adviser: Leslie Curren
74. Alteration of Flight Initiation Distance in House Sparrows (*Passer domesticus*) in Response to Potential Predators and Environmental Factors  
*Shayna E. Purdy*  
Major: Zoology  
*Nicole E. Sharpe*  
Major: Biology  
Adviser: Leslie Curren

75. Grid Parity and Comparative Energy Costs  
*Emily B. Sluder*  
Major: Environmental and Resource Economics  
Adviser: Douglas Morris

76. Experimental Adaptation of a Clinical Cystic Fibrosis Isolate to Biofilm Conditions  
*Sarah C. Kremer*  
Major: Ecology, Evolution and Behavior  
Adviser: Vaughn Cooper

77. Mechanisms Underlying Lobster Trap Saturation  
*Stephanie L. Sykes*  
Major: Marine, Estuarine and Freshwater Biology  
Advisers: Elizabeth Morrissey, Winsor Watson

78. Detecting the Presence of Microcystins in Lake Erie  
*Margot S. Popecki*  
Major: Neuroscience and Behavior  
*Hallett H. Sargent*  
Major: Environmental Sciences  
Advisers: Timothy Moore, Amanda Murby, James Haney

79. Investigation of a Fas “decoy” Receptor in the Bovine Corpus Luteum  
*Cameron W. G. Grasaskamp*  
Major: Biochemistry, Molecular and Cellular Biology  
*Andraya L. Ehrlich*  
Major: Biology  
Adviser: David Townsend

80. The Accuracy and Sensitivity of Handheld Fluorometers as a Tool for Monitoring Cyanobacteria in Lakes  
*Ryan P. Brown*  
Major: Zoology  
Advisers: Amanda Murby, James Haney

81. Effects of Polybrominated Diphenyl Ether (PBDE) Dose on Liver Global Gene Expression in Rats  
*Alexandra R. Soucy*  
Major: Nutrition  
Adviser: Gale Carey

82. Effects of land use on DOC bioavailability in stream water  
*Shannen N. Miller*  
Major: Environmental Sciences  
Adviser: William McDowell

83. How Do Domesticated Dogs Respond to Different Modalities When Using Skype™?  
*Monique A. Beaulieu*  
Major: Zoology  
Adviser: Leslie Curren

84. Supplementation of *Ciona intestinalis* in the Diet of the Green Sea Urchin *Strongylocentrotus droebachiensis*  
*Mary B. Offutt*  
Major: Biology and Marine, Estuarine and Freshwater Biology  
Adviser: Larry Harris

85. Effects of Allelopathic Chemicals Produced by *Alliaria petiolata* on Arbuscular Mycorrhizae Fungi  
*Brianne L. Wheelock*  
Major: Environmental Sciences  
Adviser: Serita Frey

86. Novel Production Methods for Greenhouse African Marigolds: Sensor Based Irrigation and Controlled Release Fertilizers  
*Luke D. Miller*  
Major: Sustainable Agriculture and Food Systems  
Adviser: Andrew Ogden, Brian Krug
<table>
<thead>
<tr>
<th>Project Title</th>
<th>Thesis in Charge</th>
<th>Major(S)</th>
<th>Adviser(S)</th>
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<tr>
<td>Characterization of Plant Palmitoyltransferase Mutants in Arabidopsis thaliana Using Genetic and Biochemical Approaches</td>
<td>Megan E. Honeywell</td>
<td>Biochemistry, Molecular and Cellular Biology</td>
<td>Estelle Hrabak</td>
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<tr>
<td>The Effects of Sex and Age on Dogs' Ability to Improve on a Novel Cognitive Task</td>
<td>Jaime H. DeForest</td>
<td>Zoology</td>
<td>Leslie Curren</td>
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<td>Human Identification Among Non-human Primates</td>
<td>Jessica L. Manuel</td>
<td>Animal Science</td>
<td>Leslie Curren</td>
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<td>Effects of Distractedness on Accuracy in a Cognitive Task</td>
<td>Brittaney L. Buchanan</td>
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<td>Leslie Curren</td>
</tr>
<tr>
<td>Association Between Polymorphisms in the Serotonin Transporter Gene and Brain Oscillatory Power During Source Memory</td>
<td>Yamsi K. Prasad</td>
<td>Neuroscience and Behavior</td>
<td>Robert Ross</td>
</tr>
<tr>
<td>Does the UNH Campus Offer a Healthy Eating Environment?</td>
<td>Akaylah J. Glidden</td>
<td>Nutrition and Ecogastronomy</td>
<td>Jesse Morrell</td>
</tr>
<tr>
<td>Determination of p53 Distribution and Functionality in Canine Acute Myeloid Leukemia</td>
<td>Kim Remillard</td>
<td>Biomedical Science</td>
<td>Charles Walker</td>
</tr>
<tr>
<td>O-GlcNAcylation Alters Keratin 8/18 Architecture of HPV-16 Infected Cervical Cancer (SiHa) Cells</td>
<td>Crystal W. Hermawan</td>
<td>Biomedical Science</td>
<td>David Townsend</td>
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<td>Healthy Green Campus: Measuring Flame Retardants in UNH Dorms</td>
<td>Mason H. Adams</td>
<td>Biomedical Science</td>
<td>Gale Carey</td>
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<td>The Establishment of Invasive Shrub Glossy Buckthorn (Frangula alnus) in Naturally Occurring Forest Canopy Gaps in Southern New Hampshire</td>
<td>Heidi I. Giguere</td>
<td>Wildlife and Conservation Biology</td>
<td>Thomas Lee</td>
</tr>
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<td>In Vitro Effects of O-GlcNAcylation on Keratin 8/18 Filaments in Cervical Cancer Cells</td>
<td>Stephanie A. Parisi</td>
<td>Biomedical Science</td>
<td>David Townsend</td>
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<tr>
<td>Competitive Advantage of Vibrio parahaemolyticus Harboring Lyso-genic f237-like Phage</td>
<td>Bethany S. Parker</td>
<td>Biomedical Science</td>
<td>Cheryl Whistler</td>
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<td>100</td>
<td>Development of Model to Predict Colostrum Quality using Dairy Herd Improvement Data</td>
<td>Elizabeth L. Clark</td>
<td>Animal Science</td>
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<td>101</td>
<td>Evaluating the Adequacy and Accessibility of Recreation Facilities at UNH</td>
<td>Caroline E. Connors</td>
<td>Nutrition and Ecogastronomy</td>
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<td>102</td>
<td>Applying Nematode Chemotaxis for Assessment of <em>Vibrio parahaemolyticus</em> Virulence</td>
<td>Sumer S. Panesar, Kyle A. Scarano</td>
<td>Biomedical Science</td>
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<td>103</td>
<td>Assessing Methods for Generating Estimates of Leaf Area Index in Northern Temperate Forests</td>
<td>John H. Hastings</td>
<td>Environmental Science</td>
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<td>104</td>
<td>Healthcare Data Informatics: UNH Panama 2015</td>
<td>Sotirios D. Georgiadis</td>
<td>Biochemistry, Molecular and Cellular Biology</td>
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<td>106</td>
<td>Effects of Increased Soil Moisture on Aggressive Behavior in Pavement Ants</td>
<td>Molly Lawrence-Webb</td>
<td>Wildlife and Conservation Biology</td>
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<td>107</td>
<td>Production of Estradiol and Matrix Metalloproteinases by an Immortalized Human Granulosa Line</td>
<td>Garrett L. Klokman</td>
<td>Biochemistry, Molecular and Cellular Biology</td>
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<td>108</td>
<td>Early Signaling Events Involved in Establishing the Symbiotic Relationship Between <em>Elaeagnus angustifolia</em> and <em>Frankia</em> sp. Strains EAN1pec, EuI1c, and EuN1f</td>
<td>Melissa E. McLaughlin</td>
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<td>109</td>
<td>Determining the Effects of Therapy Dog Interactions on Human Blood Pressure and Salivary Stress Hormone Concentrations</td>
<td>Briah M. Parchment, Marsha Barden, Barbara Brothwell, Michael L. Marx</td>
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<td>110</td>
<td>Does the Presence of Hemolysin Genes correlate with the competitive fitness of <em>V. parahaemolyticus</em></td>
<td>Saba Ilyas</td>
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<td>111</td>
<td>Influence of phenotypic switching on virulence by emergent <em>Vibrio parahaemolyticus</em></td>
<td>Puskar Siwakoti</td>
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<td>112</td>
<td>The Effects of Temperature on Relative Fitness of <em>V. parahaemolyticus</em> Strains from the Great Bay Estuary</td>
<td>Tiffany L. DeGroot, Ashley L. Marckiewicz, Bethany S. Parker</td>
<td>Biochemistry, Molecular and Cellular Biology</td>
</tr>
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</table>
113. Carnivore Diet Identification Through Scat and Genetic Analysis in Namibia, Africa
Alicia J. Walsh
Major: Biomedical Science
Adviser: Andrew Conroy, Anne Kuntzel

114. Personality Type in Relation to Learning Performance in Goats (Capra aegagrus hircus)
Bethany A. Bucciarelli
Major: Neuroscience and Behavior
Allison C. Duquette
Major: Biology
Adviser: Leslie Curren

115. Toxic Cyanobacteria Aerosols from Lake Attitash, MA and Implications for Public Health
Katharine L. Langley
Major: Ecology, Evolution and Behavior
Adviser: James Haney

116. Effects of Diabetic Conditions on Endothelial Cell Function in Relation to Atherogenesis
Alexander R. D. Jordon
Major: Biochemistry, Molecular and Cellular Biology
Briana L. VanVerdeghem
Major: Biomedical Science
Adviser: Thomas Foxall

117. The Flavor of Animal Life: Double in Situ Hybridization of Evolutionarily Ancient Sensory Receptors in the Cnidarian, Hydra magnipapillata
Janine R. Appleton
Connor A. Bell
Hannah C. Glanville
Molly A. Hartley
Julie A. Peterson
Major: Biomedical Science
Adviser: David Plachetzki

118. A Tale of Two Evolutionary Paths: A Comparison of Symbiotic Evolution of Vibrio fischeri Colonization of Euprymna scolopes and Laboratory Culture Driven Evolution
Brandon J. McDonald
Major: Biomedical Science
Matthew R. Coyle, Randy L. Foxall, Sabrina Pankey
Adviser: Cheryl Whistler

119. Optimized Separation of Estuarine Plankton To Determine Associations with Vibrios
Elizabeth A. Deyett
Emily J. Shultz
Major: Biomedical Science
Megan Hartwick
Erin Urquhart
Adviser: Steve Jones

120. The Effects of Cytokinin on Adventitious Root Formation in Arabidopsis Thaliana
Kaylyn N. Bergquist
Major: Genetics
Julie M. Cupido
Major: Biology
Adviser: Dennis Mathews

121. Evolving the Plasma Free AA Dose-response Techniques to Determine Bioavailability of Met in RP-Met Supplements
Devan L. Chirgwin
Major: Genetics
Nancy L. Whitehouse
Adviser: Andre Brito

122. Temporal Characterization of the DNA Damage Response in Human Embryonic Kidney Cells Treated with the Cytotoxic Drug Camptothecin
Gwyneth M. Welch
Major: Neuroscience and Behavior
Kevin J. Leahy
Adviser: Feixia Chu

123. Production of Decaffeinated Tea through Genetic Engineering
Laura A. Van Beaver
Major: Neuroscience and Behavior
Adviser: Subhash Minocha

124. Effect of Whole Grain Consumption on Markers of Metabolic Syndrome
Suzanne M. Hogan
Major: Nutrition
Advisers: Jesse Morrell and Joanne Curran-Celentano

125. The Effects of Nocardia Strains Cas13 and Fa12 on Actinorhizal Plant Nodulation and Symbiosis
Emily A. Lundstedt
Major: Biomedical Science
Advisers: Faten Ghodhbane-Gtari, Louis Tisa
PRESENTATION ABSTRACTS ARE AVAILABLE ON THE COLSA URC WEBSITE:
http://www.unh.edu/urc/colsa-urc

2014-2015 COLSA Undergraduate Research Conference Committee

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Pam Wildes  Conference Co-Chair
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Molly Doyle  Hamel Center for Undergraduate Research
Stuart Grandy  Department of Natural Resources & the Environment
Richard Smith  Department of Natural Resources & the Environment
Paul Tsang  Department of Molecular, Cellular & Biomedical Sciences
   & Director, Hamel Center for Undergraduate Research
Charles Walker  Department of Molecular, Cellular & Biomedical Sciences
Wilfred Wollheim  Department of Natural Resources & the Environment

Special Thanks to:
Lynne Cooper  Chair, UNH URC Planning Committee

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Dean, College of Life Sciences and Agriculture

The Hamel Center for Undergraduate Research

Hors d’ oeuvres will be available in the Granite State Room during the poster session
COLLEGE OF LIFE SCIENCES AND AGRICULTURE

The College of Life Sciences and Agriculture (COLSA) comprises a diverse group of faculty and staff whose teaching and research expertise represents a broad range of basic and applied research in the biological sciences. In this framework, undergraduates are an integral part of the research programs of many COLSA faculty members, providing a rewarding experience for both the faculty member and the students involved. Through direct interaction with faculty and by designing and carrying out their own research projects, students learn the process by which information is gathered and presented in their discipline. The Hamel Center for Undergraduate Research provides a unique opportunity for students to design and implement research projects. Faculty members benefit from these experiences through closer contact and communication with the undergraduate population and increased research productivity. Research experiences and undergraduate mentoring are part of the professional development of both faculty and students and are an important part of the collaborative and inquiry-based learning environment that characterizes COLSA.

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