UNC Charlotte
Undergraduate Research Conference

Friday, April 20, 2018

Barnhardt Student Activity Center

Conference Program

UNC CHARLOTTE
Welcome

Welcome to the 2018 UNC Charlotte Undergraduate Research Conference (URC)! The URC continues to grow each year and this year we have almost 300 undergraduate students presenting. We have four formal sponsors for the conference: Academic Affairs, the Atkins Library, the Honors College, and the Levine Scholars Program. Additionally, the URC receives generous support from all the University’s colleges and many of the University’s departments. With this support we are able to present a number of awards including department awards, Community Engaged Research awards, Sustainability awards, and Honors awards. Thank you to all the sponsors, the Colleges, and the Departments for their monetary support of the conference. A special thank you goes to the Charlotte Research Institute for their continued support of the Atkins Library Research Awards.

The Undergraduate Research Conference would not be possible without the commitment of our UNC Charlotte faculty. The conference has a strong representation from faculty members who participate as research advisors, mentors, and judges. A big thank you to faculty for your service and dedication to undergraduate research and scholarship at UNC Charlotte. I would especially like to recognize the conference organizing committee, the Levine Scholars, and the staff in the Office of Undergraduate Education, all of whom played integral parts in the planning for today’s event. Most of all please join me in congratulating our Undergraduate Researchers for their hard work and efforts. Now engage in the conference presentations, take pictures, and use the #NinerURC18 to share your URC moments on social media.

Enjoy your day!

Dr. Erik Jon Byker
Chair, URC 2018 Organizing Committee

UNC Charlotte URC 2018 Organizing Committee Members

Erik Byker, Chair; Reading and Elementary Education, Cato College of Education

Aba Ebong, Electrical and Computer Engineering, William States Lee College of Engineering

Chiamaka Okonkwo, Student, Levine Scholars Program

Coral Wayland, Associate Dean for Curriculum, Office of Undergraduate Education

Diane Zablotsky, Director of the Levine Scholars Program

Jessica Norwood, Doctoral student, Reading and Elementary Education

Lanny Inabnit, Kinesiology, College of Health and Human Services

Malin Pereira, English and Executive Director of the Honors College

Matt Elardo, Student, Levine Scholars Program

Melissa Goodnight, Post Doc, Office of Undergraduate Education

Ryan Harris, J. Murrey Atkins Library

Sharon Reichard, J. Murrey Atkins Library

Tamara Johnson, Academic Planning and Analysis, Office of the Provost
URC 2018 Schedule of Events
Friday, April 20, 2018

7:30 AM: Registration opens in the James H. Barnhardt Student Activity Center (SAC)

Students and judges arrive to register. The Salon rooms are open for students to set-up their PPT presentations. A light, continental style breakfast is provided.

8:45 AM – 12:15 PM: Oral PPT Presentations

Judges and participants will follow the posted schedule and times for room assignments. Students must upload their presentation to their assigned Salon rooms by 8:30 AM.

- Salon A: Biological Sciences
- Salon B: Health and Physical Sciences
- Salon C: Social Sciences
- Salon D: Humanities
- Salon E: Communications and Education

10:00 AM – 12:00 PM: Concurrent Poster Presentations

Poster presenters should register their poster between 9:00 AM – 9:45 AM on Friday, April 20. The judging will begin at 10:00 AM. At 11:45 AM, the presenters should start taking down their posters. Please fold up your presentation easel, as well, and place it on the floor next to where you presented.

12:30 PM – 2:00 PM: Luncheon and Awards Ceremony

The Luncheon and Awards Ceremony will be in Salons D & E. Thank you to the Honors College for the sponsorship of the drinks at the luncheon. Thank you to the Belk College of Business Graduate Programs for the sponsorship of desserts.

1:15 PM – 2:00 PM: Awards Ceremony

Remarks from students who presented at the 2018 National Conference of Undergraduate Research Presentation of Departmental Awards: Dr. Erik Jon Byker
Presentation of Community Engagement Award: Dr. Tamara Johnson
Presentation of Sustainability Awards: Dr. Diane Zablotsky
Presentation of Honors College Awards: Dr. Malin Pereira, Executive Director of the Honors College
Presentation of Atkins Library Research Awards: Dr. Anne Cooper Moore, Dean of Atkins Library

*At the conclusion of the Awards Ceremony, we asked that all winners remain in the Salons D & E for further instructions about group pictures. Much thanks to Wade Bruton for providing photography for URC 2018.
Salon A Oral Presentations 1: Biological Sciences

8:45 AM: Role of NEIL3 Zinc finger-GRF motifs in Base Excision Repair
Anh Ha H
Faculty Advisor: Dr. Shan Yan, Department of Biological Sciences

9:00 AM: Relationship between Antibiotic Resistance and Virulence in Salmonella Typhimurium
Seth Flynn H
Faculty Advisor: Dr. James Oliver, Department of Biological Sciences

9:15 AM: Prevalence of Plasmodium Vivax Infection in Duffy Negative Ethiopians
Daniel Kepple H, G
Faculty Advisor: Dr. Eugenia Lo, Department of Biological Sciences
Additional Author(s): Kareen Pestana

9:30 AM: Endothelial cells, Inflammasomes, and Breast Cancer Progression
Kristin Smoot H
Faculty Advisor: Dr. Didier Dréau, Department of Biological Sciences

9:45 AM: Understanding the Role of Yeast Hsp40 in RNR Subunit Localization
Monserrat Cuevas H
Faculty Advisor: Dr. Andrew Truman, Department of Biological Sciences

10:00 AM: The Hsp70 Co-chaperone Ydj1/HDJ1 Regulates Ribonucleotide Reductase Activity
Issac Sluder H
Faculty Advisor: Dr. Andrew Truman, Department of Biological Sciences
Additional Author(s): Laura Knighton, Nikita

10:15 AM: BREAK

10:25 AM: Development of Cellular Models of DNA Damage and Repair Relevant to Sepsis
John Patterson H
Faculty Advisor: Dr. Mark Clemens, Department of Biological Sciences

10:40 AM: Rational Chemovirotherapy Shows Improved Efficacy Against Pancreatic Cancer
Gaith Droby H
Faculty Advisor: Dr. Valery Grdzelishvili, Department of Biological Sciences

10:55 AM: Identification of Cargo of an Uncharacterized SNX-BAR Protein
Daria Al-Khalidi H
Faculty Advisor: Dr. Richard Chi, Department of Biological Sciences

11:10 AM: The v-SNARES, Snc1 and Snc2 Mediate Early Endosome Fusion in Yeast
Henry Weaver H
Faculty Advisor: Dr. Richard Chi, Department of Biological Sciences

11:25 AM: Understanding the Role of Intracellular RNA Sensors in the Recognition of Bacteria
Sara Lynn Currin H
Faculty Advisor: Dr. Ian Marriott, Department of Biological Sciences
11:40 AM: Impact of Pharmaceuticals on Microbial Communities in Urban Streams
Robert Dixon H, S
Faculty Advisor: Dr. Molly Redmond, Department of Biological Sciences

11:55 AM: Socioecology of Aedes Fever Virus Vectors
Tyler Rapp H, S, CE
Faculty Advisor: Dr. Michael Dulin, Department of Public Health Sciences

Salon B Oral Presentations 2: Health, Mechanical, & Physical Sciences

8:45 AM: Effects of Real-Time Video Feedback on Plantar Pressure Measures in Individuals with Chronic Ankle Instability during Walking
Anna Maria Ifarraguerrri H
Faculty Advisor: Dr. Luke Donovan, Department of Kinesiology
Additional Author(s): Danielle Torp

9:00 AM: Thermal Conductivity of C3N Nanotubes
Patrick Guarente
Faculty Advisor: Dr. Alireza Tabarraei, Department of Mechanical Engineering
Additional Author(s): Mohan Surya Raja

9:15 AM: Study of Thermal Effects on Measurement of Freeform Optics in a Temperature Controlled Enclosure
Laura Hopper
Faculty Advisor: Dr. Christopher Evans, Department of Mechanical Engineering

9:30 AM: Real-Time Prognostics of Power Converters using the Internet of Things
Michael Ajazi
Faculty Advisor: Dr. Babak Parkhideh, Department of Electrical and Computer Engineering

9:45 AM: Efficient Measurement Method of Quantifying Mass and Area of Firebrands
Noah Bull CE
Faculty Advisor: Dr. Aixi Zhou, Department of Engineering Technology and Construction
Additional Author(s): Ja Juan Battle

10:00 AM: Gain and Loss Assisted Cloaking of Optical Fibres
Jordan McCourt H
Faculty Advisor: Dr. Tsing-Hua Her, Department of Physics and Optical Science

10:15 AM: BREAK

Mohamad Aboufoul
Faculty Advisor: Dr. Samira Saikh, Department of Computer Science
10:40 AM: Investigation of a One Flask Method for the Preparation of Silver Nanoparticle Solutions for 2-D Plasmon Enhancing Films
James Bailey S
Faculty Advisor: Dr. Marcus Jones, Department of Chemistry

10:55 AM: Synthesis of Bisferrocenoylhydrazone of 4-tert-butyl-2,6-diformylphenol for Use as a Ligand in the Production of Molecular Space
William Hixson S
Faculty Advisor: Dr. Jordan Poler, Department of Chemistry

11:10 AM: Silver(I) Complexes with New Heterocyclic Thiones and Selones
Hussain Al Tuwailib
Faculty Advisor: Dr. Daniel Rabinovich, Department of Chemistry

11:25 AM: Silver(I) Compounds with Potential Anticancer Activity
Bryant Loor-Garcia H
Faculty Advisor: Dr. Daniel Rabinovich, Department of Chemistry

Salon C Oral Presentations 3: Social Sciences

8:45 AM: Examining the Sexual Politics, Gender Roles, and Power Structures in the Book of Esther
Savanna Humphries
Faculty Advisor: Dr. Barbara Thiede, Department of Religious Studies

9:00 AM: Chögyam Trungpa: Poetic Forms of Buddhist Modernism
David Flaherty
Faculty Advisor: Dr. Alexandra Kaloyanides, Department of Religious Studies

9:15 AM: The Unintended Consequence of Counterterrorism
James Franco
Faculty Advisor: Dr. Beth Whitaker, Department of Political Science and Public Administration

9:30 AM: An Investigation of Prison Rehabilitation Programs
Jessica Francis H
Faculty Advisor: Dr. Jacqueline Chattopadhyay, Dept. of Political Science & Public Administration

Marc Smith H
Faculty Advisor: Dr. Mark Wilson, Department of History

10:00 AM: The Wreck of the Old North State
Bradley Holt H
Faculty Advisor: Dr. Mark Wilson, Department of History

10:15 AM: BREAK
10:25 AM: American Restorationism and the Alexandrian School  
Justin Sells H  
Faculty Advisor: Dr. Christopher Cameron, Department of History

10:40 AM: The Irish in the American Revolution  
Alea Chambers H  
Faculty Advisor: Dr. Christopher Cameron, Department of History

10:55 AM: "A House Divided": Religion's Role in the Formation of Mitchell County in 1861  
Sarah Presnell H  
Faculty Advisor: Dr. Christopher Cameron, Department of History

11:10 AM: I Wanna Be Like That!: How the Ball Culture Used Categories to Resist Social Restrictions  
Gabrielle Gray H  
Faculty Advisor: Dr. Brent Cebul, Department of History

11:25 AM: White Working Class Anger as the Leading Factor for the 1898 Wilmington Race Riot  
Anthony Yeager H  
Faculty Advisor: Dr. Shepard McKinley, Department of History

11:40 AM: Republican Paramilitary Women of the Troubles  
Tabitha Wood H  
Faculty Advisor: Dr. Peter Thorsheim, Department of History

11:55 AM: Mysticism of the Mountains  
Ty Sauerbrey H  
Faculty Advisor: Dr. Carol Higham, Department of History

Salon D Oral Presentations 4: Humanities

8:45 AM: Thinking the End of Ontotheology: Aristotle and Hegel through the Eyes of Heidegger  
Lucas Carroll H  
Faculty Advisor: Dr. Reginald Raymer, Department of Philosophy

9:00 AM: Midnight in the Garden of Savannah Society: Examining the Influence of Marketing and Publishing in Public Perception  
Susanna Parkhill H  
Faculty Advisor: Dr. Kirk Melnikoff, Department of English

9:15 AM: Unmasking the Masochist: The Conception and Impact of Yukio Mishima's "Confessions of a Mask"  
Kelly Brabec H, G  
Faculty Advisor: Dr. Kirk Melnikoff, Department of English

9:30 AM: Of Ravens and Romanticism: the Enduring Legacy of Edgar Allan Poe in American Education  
Jordan Costanza H  
Faculty Advisor: Dr. Kirk Melnikoff, Department of English
9:45 AM: 1 Title, 2 Mommies, and 3 Stories: Publishers’ Impact on *Heather Has Two Mommies*  
Christina Ramsey  
Faculty Advisor: Dr. Kirk Melnikoff, Department of English

10:00 AM: “Now Receive My Word.” Analysis of Rhetoric and Authorship in the FLDS Church  
Jenna Hainlen  
Faculty Advisor: Dr. Kirk Melnikoff, Department of English

10:15 AM: BREAK

Jarrett Moseley  
Faculty Advisor: Dr. Malin Pereira, Department of English and the Honors College

10:40 AM: An Analysis of LGBTQ Personas, Sexuality, and Gender and Sex-based Stereotypes Portrayed in US Television  
M. Cheyenne Pennell  
Faculty Advisor: Dr. Meghan Barnes, Department of English

**Salon E Oral Presentations 5: Communications and Education**

8:45 AM: Differences between the Japanese and American Family Plan  
Joseph LeDrew  
Faculty Advisor: Fumie Kato, Department of Culture and Language Studies

9:00 AM: Young Japanese and Ikebana  
Sarah Crawley  
Faculty Advisor: Fumie Kato, Department of Culture and Language Studies

9:15 AM: The Utter Truth  
Jordan Brusso  
Faculty Advisor: Dr. Richard Leeman, Department of Communication Studies

9:30 AM: Assessing Elementary Boys’ Interest in Texts within the Classroom Library  
Kimberly Burchard  
Faculty Advisor: Dr. Paola Pilonieta, Department of Reading and Elementary Education

9:45 AM: How Does a Black Male Teacher Impact the Behavior of Black Male Students?  
Terry McIendon  
Faculty Advisor: Dr. Susan Harden, Department of Middle, Secondary, and K-12 Education

10:00 AM: Evaluating the Impact of Professional Development in CxC  
Sarah Davis  
Faculty Advisor: Dr. Heather Bastian, Communication across the Curriculum  
Additional Author(s): Angela Holland, Aaron Osborne, & Yassmin Sarabadian
Poster Presentations
Judging Begins: 10:00 AM
Open to the Public: 10:00 AM – 12:00 PM

* At 11:45 AM, the presenters should start taking down their posters. Please fold up your presentation easel, as well, and place it on the floor next to where you presented.

1. Gender and Age Constructs in Prehistoric Americas: Skeletal and Diet Indicators of Identities
   Luisa Donoso
   Faculty Advisor: Dr. Sarah Juengst, Department of Anthropology

2. Effects of Chronic and Acute Salinity Stress on the Behavior of a Burrowing Sea Anemone, Nematostella Vectensis
   Meredith Collins
   Faculty Advisor: Dr. Adam Reitzel, Department of Biological Sciences
   Additional Author(s): Whitney Leach

3. Factors Facilitating the Geographic Range of Invasive Species in the United States
   Anja Lisby
   Faculty Advisor: Dr. Adam Reitzel, Department of Biological Sciences

4. Inflammasomes, Fibrosis, and Breast Cancer Progression
   Makenzie Postma
   Faculty Advisor: Dr. Dider Dreau, Department of Biological Sciences

5. Identifying Synergistic Drug Combinations for Cancer Treatment Using High-throughput Screening of an Hsp40 CRISPR KO Cell Line
   Jacob Blackman
   Faculty Advisor: Dr. Andrew Truman, Department of Biological Studies
   Additional Author(s): Nitika

6. Comparing the Effects of Alum-Adjuvanted Immunization with Complete Freund’s-Adjuvanted Immunization in Female-Lewis Rats
   Rachel Jones
   Faculty Advisor: Dr. Kenneth Bost, Department of Biological Sciences

7. Investigating the Role of Global Medical Brigades in Developing Sustainability through Community Engagement
   Rachel Jones
   Faculty Advisor: Dr. Amanda Dexter, Department of Kinesiology

8. Water Purification: Reusability Studies of Nanomaterials
   Kayla Blackburn
   Faculty Advisor: Dr. Jordan Poler, Department of Chemistry

H – Honors College  S – Sustainability
G – Global  CE – Community Engagement
   Nickolas Zelenka
   Faculty Advisor: Dr. Jordan Poler, Department of Chemistry

10. Examination of the Activity of a Proposed N-acetylglucosamine Transferase Using High Performance Liquid Chromatography
    Claire Gates
    Faculty Advisor: Dr. Jerry Troutman, Department of Chemistry

11. The Synthesis and Use of Fluorescent Analogues as Probes in the Glycan Biosynthesis Pathway
    Kara Lugli
    Faculty Advisor: Dr. Jerry Troutman, Department of Chemistry

    Ozioma Edokobi
    Faculty Advisor: Dr. Christopher Bejger, Department of Chemistry

13. Synthesis and Characterization of Superatomic Solids from Dichalcogenide Capped Trinuclear Nickel Molecular Clusters
    Stephen Collins
    Faculty Advisor: Dr. Christopher Bejger, Department of Chemistry
    Additional Author(s): Matthew Freeman, Eli Snider

    Josh Sailer
    Faculty Advisor: Dr. Michael Walter, Department of Chemistry

15. The Synthesis and Electrochromic Properties of Highly Fluorescent N, N'-Dibenzylated Thiazolothiazole Viologens
    Kristin Sandor
    Faculty Advisor: Dr. Michael Walter, Department of Chemistry

16. Thiazolo[5,4-d] thiazole Compounds’ Functionality as High-performance Fluorophores and their Environment-sensing Applications
    Kimberly Goins
    Faculty Advisor: Dr. Michael Walter, Department of Chemistry
    Additional Author(s): Nickolas Sayresmith, Kristin Sandor, Josh Sailer

17. Understanding Effect of Alkyl Chain Length on Exciton Diffusion Parameters in Porphyrin Thin Films for OPV Applications
    Jaclyn Stiller
    Faculty Advisor: Dr. Michael Walter, Department of Chemistry
18. Synthesis of N-heterocyclic Thione and Selone Silver(I) Complexes
   Evan Grimm
   Faculty Advisor: Dr. Daniel Rabinovich, Department of Chemistry

19. N-heterocyclic Thione and Selone Complexes of Silver(I)
   Kirk John Arcena
   Faculty Advisor: Dr. Daniel Rabinovich, Department of Chemistry

20. Synthesis and Reactivity of N-heterocyclic Telone Ligands
   Mustafa Alshurafa
   Faculty Advisor: Dr. Daniel Rabinovich, Department of Chemistry

21. Experimental Approaches on the Synthesis of Highly Scattering Silver Nanoparticles
   Abdurakhmon Abdulatipov
   Faculty Advisor: Dr. Marcus Jones, Department of Chemistry

22. Fabrication and Characterization of Single Walled Carbon Nanotube Thin Films on ITO glass
   Dominic Finis
   Faculty Advisor: Dr. Craig Ogle, Department of Chemistry

23. New Orleans Pralines: A Historical, Economic, and Cultural Research Tool
   Maiah Dixon
   Faculty Advisor: Dr. Ashli Stokes, Department of Communication Studies

24. Applying Data Analytics Techniques to Aid the Teaching Process
   Devansh Desai
   Faculty Advisor: Dr. Mohsen Dorodchi, Department of Computer Science
   Additional Author(s): Aileen Benedict

25. Studying the Dynamics of Groups on the Students' Perception in Activity Based Active Learning Classroom
   Erfan Al-Hossami
   Faculty Advisor: Dr. Mohsen Dorodchi, Department of Computer Science

26. Visualization, Assessment and Analytics in Data Structures Learning Modules
   Matthew McQuaigue
   Faculty Advisor: Dr. Kalpathi Subramaniam, Department of Computer Science
   Additional Author(s): Anna Boekelheide

27. Increasing Engagement in Introductory Computer Science Courses by Providing Compelling Assignments
   Alec Goncharow
   Faculty Advisor: Dr. Erik Saule, Department of Computer Science

H – Honors College  S – Sustainability  G – Global  CE – Community Engage
28. Housing Instability in Mecklenburg County
Taelor Malcolm H, CE
Faculty Advisor: Dr. Ashley Clark, Department of Economics

29. Removal of Agricultural Nutrient Pollution using a Biochar Media
Savannah Green S
Faculty Advisor: Dr. Mariya Munir, Department of Civil and Environmental Engineering

30. Wideband Contactless Current Sensing using Hybrid Magnetoresistor-Rogowski Sensor in High Frequency Power Electronic Converters
Ian Hess
Faculty Advisor: Dr. Babak Parkhideh, Department of Electrical and Computer Engineering

31. A Fence around Cane: The Beginning of the Authorial Function in Jean Toomer's Cane
Mason Gibbs H
Faculty Advisor: Dr. Kirk Melnikoff, Department of English

32. Analysis of Macroinvertebrates as Bioindicators for an Urban Watershed
Haley Herrick S
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Sciences

33. Grey Water and How it Will Save Us
Richard Micham S, CE
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Sciences
Additional Author(s): Mitchell Venator, Spencer Bost, Sean Clark

34. Reactive Phosphorus in Reedy Creek, Charlotte, NC
Kaitlynn Bryan-Scaggs H, S, CE
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Sciences

35. Relationship of Chlorophyll A to Eutrophication and Algal Blooms in Fresh Water Ecosystems
Katie Mazane S
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Sciences
Additional Author(s): Haley Herrick

36. The Human Water "Tab": Diet's Influence on The Water Footprint
Amber-Lynn Cruz S
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science

37. The Environmental Concerns of Turning Water to Beer
Joseph Zufall S
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science

38. Desalination
Clay Grubb S
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science
Additional Author(s): Caroline Brinegar, Devang Oza
39. An Endangered Species: The Pygmy Hippopotamus
Sarah Ray S, G
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science

40. The Effects of Agriculture on Water Quality
Robert Quinlan
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science
Additional Author(s): Dereck Serna

41. Sustainable Gold Mining
William Payne S
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science
Additional Author(s): Curtis Moore

42. Dam Removal
William Payne
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science
Additional Author(s): Curtis Moore, Kelsie Dwyer, Senon Tinoco

43. Flint Michigan: Freshwater Supply and Human Rights
Erika Hathaway
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science
Additional Author(s): Phillip Pollachioli

44. Microplastics in Freshwater Ecosystems
Brittany Reid
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science
Additional Author(s): Rachel Stiller

45. Investigating Ground Water
Mitchell Yokeley
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science
Additional Author(s): Matthew Mercuri

46. Impacts of Agriculture on Water Quality
Leah Lutz
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science
Additional Author(s): Kenneth Hower

47. Policies to Promote Water Sustainability in California
Leah Lutz S
Faculty Advisor: Dr. Craig Allan, Department of Geography and Earth Science
Additional Author(s): Sarah Ray

48. Snow Sports
Brian Gilley
Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science
49. Effects of Dams on Trout in the U.S.
   Tyler Davis
   Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science
   Additional Author(s): A.J. Smith

50. Endangered Freshwater Species: The Axolotl
   Elizabeth Batianis
   Faculty Advisor: Dr. Sandra Clinton, Department of Geography and Earth Science
   Additional Author(s): Bailey Jenkins

51. Higher Levels of Diversity across Romer’s Gap than Previously Demonstrated:
    Implications of Newly Discovered Tetrapod Specimens
   Caroline Brinegar
   Faculty Advisor: Dr. William Garcia, Department of Geography and Earth Science

52. Seasonal Variation in Stable Isotopes
   Emilia Torrellas
   Faculty Advisor: Dr. David Vinson, Department of Geography and Earth Science

53. pH Control of Urban Forest Stream Water in Charlotte
   Sydney Swafford
   Faculty Advisor: Dr. David Vinson, Department of Geography and Earth Science

54. Aquifer Storage and Recovery and its Effects on the Surface and Subsurface
   Gregory Thill
   Faculty Advisor: Dr. David Vinson, Department of Geography and Earth Science
   Additional Author(s): Amanda Lynn Ochoa

55. Assessing Spatial and Temporal Changes in the Environment on the Evolution of
    Convection in a High Shear, Low CAPE Event in NC
   Richard Sirico
   Faculty Advisor: Dr. Casey Davenport, Department of Geography and Earth Science

56. Geologic Guide to Reedy Creek Nature Preserve, Charlotte, NC
   Brandon Nickerson
   Faculty Advisor: Dr. Valerie Reynolds, Department of Geography and Earth Science

57. Likeability of Forest Bird Species to Urban Residents
   Lillian Collins
   Faculty Advisor: Dr. Sarah Gagne, Department of Geography and Earth Science
   Additional Author(s): Grant Paton

58. Urban Water Sustainability
   Vincent Spagnuolo
   Faculty Advisor: Dr. Craig Allan, Department of Geography and Earth Science
   Additional Author(s): Matthew Mercuri
59. Improvements to Agriculture to Maintain Water Sustainability
Raymond Galicia
Faculty Advisor: Dr. Craig Allan, Department of Geography and Earth Science
Additional Author(s): Brandon Nickerson

60. Climate Impact on Freshwater Resources Vulnerability in Low-lying Pacific Islands and the Need for Sustainable Harvesting
Julie Steensma
Faculty Advisor: Dr. Craig Allan, Department of Geography and Earth Science
Additional Author(s): Brandon Fallick

61. Greywater Uses and its Feasibility
Johnny Cook
Faculty Advisor: Dr. Craig Allan, Department of Geography and Earth Science
Additional Author(s): James McGukin

62. Impact of Microplastics on Aquatic Ecosystem and Human Health
Rhea Greene
Faculty Advisor: Dr. Craig Allan, Department of Geography and Earth Science
Additional Author(s): Jodi-Ann Wright

63. Limiting Marine Pollution for Marine Life Sustainability
Camden Brunick
Faculty Advisor: Dr. Craig Allan, Department of Geography and Earth Science
Additional Author(s): Mitchell Yokey

64. Grey Water Benefits Towards Water Sustainability
Mitchell Venator
Faculty Advisor: Dr. Craig Allan, Department of Geography and Earth Science
Additional Author(s): Charlotte Harrison

65. Hog Farming Waste and its Impact on Freshwater in Southeastern North Carolina
Andrew Bradley
Faculty Advisor: Dr. Craig Allan, Department of Geography and Earth Science

66. Impact of landfill leachate on groundwater in Mecklenburg County
Aric Gamble
Faculty Advisor: Dr. Craig Allan, Department of Geography and Earth Science
Additional Author(s): Kenneth Howe

67. Community Oriented Aquaponic Greenhouses in Charlotte
John Dunn
Faculty Advisor: Dr. Craig Allan, Department of Geography and Earth Science

68. Renewable Energy Sources
Devon Oza
Faculty Advisor: Dr. Craig Allan, Department of Geography and Earth Science
Additional Author(s): Matthew Bullock
69. Is United States Development Aid to the South Pacific Perpetuating Imperialist Cold War Relationships?
Asha Coutier
Faculty Advisor: Dr. Charles Houck, Department of Global Studies

70. The Effects of Notch Knockdown on Skeletal Muscle Repair in Mice Following Downhill Running
Ryan Brown
Faculty Advisor: Dr. Susan Arthur, Department of Kinesiology
Additional Author(s): Brooke Wilson, Mathew Bomkamp, Austin Palmer

71. Pancreatic Cancer Induces Skeletal Muscle Injury
Brooke Wilson
Faculty Advisor: Dr. Susan Arthur, Department of Kinesiology
Additional Author(s): Jacob Chesson, Brian Thompson, Matthew Bomkamp, Austin Palmer, Joshua Huot

72. The Feasibility of a Respiratory Therapist in a Family Physician Practice
Nikonya Godwin
Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology

73. Post-Operative Cardiothoracic Morbidly Obese Patients: An Informative Guide to Ventilating This Patient Population
Christopher Hewitt
Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology

74. Respiratory Therapy Sift Change Communication Template
Eve Herte
Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology

75. Development of a ICU Protocol for Ventilator Associated Events Patients at the Salisbury VAMC
John Moats
Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology

76. S.T.A.B.L.E.: Can it Help Stabilize a Neonate for Transport in a Non-NICU Setting?
Judith Carpenter
Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology

77. Safely Transporting Intubated Patients: Bag-Valve Resuscitation vs. Mechanical Transport Ventilator
Robin Morrison
Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology

78. Setting Optimal PEEP and how the Philips Capnography Monitor is Underutilized in this Process
Steve Johnson
Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology
79. Bronchiolitis: Standardizing Care
   J. Scott Kirkpatrick
   Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology

80. Respiratory Therapist Driven APRV Protocol
   Diana Williamson
   Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology

81. A Multi-Disciplinary Educational Program Regarding the Approach for a Decrease in Antibiotic Exposure in Very-Low Birth Weight I
   Jordan Sapp
   Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology

82. Identifying Retention Criteria in the Respiratory Therapy Programs
   Ashlyn Isenhour
   Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology

83. Cross-Training: The Good, The Bad, and The Ugly
   Jonathan Dockery
   Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology

84. Ventilatory Support for the Obese Patient: A Holistic Educational Overview
   William Webb
   Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology

85. Incorporating Nutrition as Part of COPD Care Management
   Misty White
   Faculty Advisor: Dr. Lanny Inabnit, Department of Kinesiology

86. High-Flow Oxygen Therapy in the Emergency Department
   VaNecia Lipscomb
   Faculty Advisor: Dr. Jhaymie Cappiello, Department of Kinesiology

87. HFHHNC: Should it be Standard Therapy for Extubation?
   Heather Hughes-Asher
   Faculty Advisor: Dr. Jhaymie Cappiello, Department of Kinesiology

88. Navigators Empowering Patients with COPD
   Robin Whitley
   Faculty Advisor: Dr. Jhaymie Cappiello, Department of Kinesiology

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   Faculty Advisor: Dr. Jhaymie Cappiello, Department of Kinesiology

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   Faculty Advisor: Dr. Jhaymie Cappiello, Department of Kinesiology
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Desiree Letourneau
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Kaylee Kohls
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Brittney Rhodes
Faculty Advisor: Dr. Jhaymie Cappiello, Department of Kinesiology

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Chandra Robinson
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Maria Pittman
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Edward “Calvin” Funderburk
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Faculty Advisor: Dr. Amanda Dexter, Department of Kinesiology

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Faculty Advisor: Dr. Amanda Dexter, Department of Kinesiology

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Bill Viar
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Kasey Digh
Faculty Advisor: Dr. Amanda Dexter, Department of Kinesiology

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Antione Williams
Faculty Advisor: Dr. Amanda Dexter, Department of Kinesiology

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Audra Thomas
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Faculty Advisor: Dr. Michael Troxell, Department of Kinesiology

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Faculty Advisor: Dr. Michael Troxell, Department of Kinesiology

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Faculty Advisor: Dr. Michael Troxell, Department of Kinesiology

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Faculty Advisor: Dr. Michael Troxell, Department of Kinesiology

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Faculty Advisor: Dr. Michael Troxell, Department of Kinesiology

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Faculty Advisor: Dr. Michael Troxell, Department of Kinesiology

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Faculty Advisor: Dr. Michael Troxell, Department of Kinesiology

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123. Decreasing VAP in the ICU Setting  
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Faculty Advisor: Dr. Michael Troxell, Department of Kinesiology

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Faculty Advisor: Dr. Kevin McGoff, Department of Mathematics and Statistics

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Additional Author(s): Maya Shefet, Kimberly Savage, Jaylaan Bennett

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Aaron Humphrey
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Faculty Advisor: Dr. Susan Harden, Department of Middle, Secondary, and K-12 Education

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Brett Gleason CE
Faculty Advisor: Dr. Susan Harden, Department of Middle, Secondary, and K-12 Education

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Arielle Little CE
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Maritsa Mourouzi CE
Faculty Advisor: Dr. Susan Harden, Department of Middle, Secondary, and K-12 Education

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Faculty Advisor: Dr. Susan Harden, Department of Middle, Secondary, and K-12 Education

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Hanna Weisner
Faculty Advisor: Dr. Willie Mae Abel, School of Nursing
Additional Author(s): Meredith Carroll, Casey Waldor, Lauren Krewson, Monica Qureshi, Mary Thompson

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Taylor Hall
Faculty Advisor: Dr. Willie Mae Abel, School of Nursing
Additional Author(s): Abby Golding, Shelby Clark, Elizabeth Biliar, Michael Faulkner, Camille Deisenroth

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Benjamin Scruggs
Faculty Advisor: Dr. Willie Mae Abel, School of Nursing
Additional Author(s): Haley Roberts, Kara Slusher, Olivia Cotter, Emily Arkin

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Mary Dorn
Faculty Advisor: Dr. Willie Mae Abel, School of Nursing
Additional Author(s): Brooke Cable, Jessica Mudd, Megan Qualkenbush, Julia Lopes
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Hailey Bartlett  
Faculty Advisor: Dr. Willie Mae Abel, School of Nursing  
Additional Author(s): Mattie Barringer, Jessica Evans, Haley Bunn, Claudia Steffey, Haley Furguson

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Faculty Advisor: Dr. Willie Mae Abel, School of Nursing  
Additional Authors: Hannah Key, Claire Shaw, Caitlin Harrison, Taylor Kinmann, Rachel Cox

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Faculty Advisor: Dr. Willie Mae Abel, School of Nursing  
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Faculty Advisor: Dr. Hannah Peach, Department of Psychological Science
Additional Author(s): Aria Ruggerio, Abby Canton, Sydney Barngrover, Alyssa Ingram, Kaleigh Beddingfield

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Sydney Barngrover
Faculty Advisor: Dr. Hannah Peach, Department of Psychological Science

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Faculty Advisor: Dr. Mary Michael, Department of Psychological Science
Additional Author(s): Alyssa Finkelstein

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Alyssa Finkelstein H
Faculty Advisor: Dr. Mary Michael, Department of Psychological Science

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Additional Author(s): Myles Brown

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Faculty Advisor: Dr. Diane Zablotsky, Levine Scholars and Department of Public Health

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Faculty Advisor: Dr. Diane Zablotsky, Levine Scholars and Department of Public Health

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Natalia Mejia
Faculty Advisor: Dr. Erik Jon Byker, Department of Reading and Elementary Education
Additional Author(s): Maya Sayani, Brooke Bowen

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Faculty Advisor: Dr. Erik Jon Byker, Department of Reading and Elementary Education

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Samantha Horne H
Faculty Advisor: Dr. Drew Polly, Department of Reading and Elementary Education

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   Mara Klem-O’Connor
   Faculty Advisor: Dr. Annelise Mennicke, School of Social Work
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   Faculty Advisor: Dr. Vaughn Schmutz, Department of Sociology
   Additional Author(s): Madison Holmes, Graeme Rieser

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   Faculty Advisor: Dr. Vaughn Schmutz, Department of Sociology
   Additional Author(s): Malek Odeh, Madison Harris, Abby Marks

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   Faculty Advisor: Dr. Vaughn Schmutz, Department of Sociology
   Additional Author(s): Gemaraeh Richards, Haley Hutchinson

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   Julia Nelson H, S, G
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183. Habitat for Humanity in Charlotte
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   Faculty Advisor: Dr. Justin Lane, Urban Research Institute

184. A Review of Bio Inspired Innovations in Cybersecurity
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   Faculty Advisor: Dr. Shagufta Raja, UNC Charlotte Pre-College STEM Program
   Additional Mentor(s): Dr. Ehab Al-Shaer, Dr. Yasin Raja, Abdullah Farooq
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