

OFFICE FOR
**UNDERGRADUATE
RESEARCH**

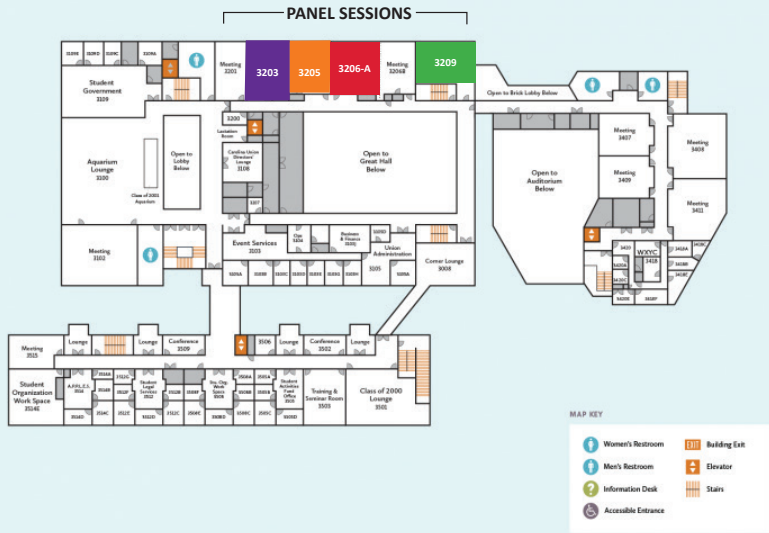
THE EIGHTEENTH ANNUAL

CELEBRATION OF UNDERGRADUATE RESEARCH

April 27, 2017 • 1:15 PM
Frank Porter Graham
Student Union



SECOND FLOOR



THIRD FLOOR



Dear Carolina Community:

Welcome to the annual Celebration of Undergraduate Research!

The Office for Undergraduate Research (OUR) at the University of North Carolina at Chapel Hill hosts the Celebration each year to recognize and share the accomplishments of Carolina's undergraduates. We are so glad that you are joining us today to learn more about the wide variety of research projects in which our undergraduate researchers are engaged.

As you'll see in this program, students will be presenting in one of two poster sessions in the Great Hall or during panel discussions in other rooms in the Union. A map is included on the facing page to assist you in locating those rooms.

This year, many of the poster and panel sessions have been organized by special themes which were selected to encourage cross-disciplinary connections and conversations.

We also invite you to join us at our Award and Recognition Ceremony at 3:45 p.m. in the Auditorium. At the Award and Recognition Ceremony, we will acknowledge the Best Poster award winners, Graduate Student Mentor award winners, graduating OUR student Ambassadors, and our 2016-2017 Carolina Research Scholars.

If you need information or assistance, please talk with any of the OUR staff or student ambassadors at the welcome and registration tables.

Thank you for attending the Celebration. We appreciate your support of undergraduate research.

Sincerely,

Troy Blackburn, PhD
Associate Dean & Director
Office for Undergraduate Research (OUR)

PANEL SESSIONS

All panel sessions take place upstairs, directly across the atrium from the stairwell. There will be a staff member at the top of the stairs who can direct you to the panel rooms.

Each student has ten minutes to present research. This is followed by a question and answer period where all the students in the panel participate together, with a goal of encouraging conversation about the connections between the projects.

Computing and Programming: 1:15-2:15 pm **Room 3203**

1:15-1:25 Evan Gertis, Physics & Astronomy

Programming Stepping Motors with NI LabView

Advisor: Hugon Karwowski

1:25-1:35 Lucas deHart, Physics & Astronomy

TUNL: Revealing 50 Years of Excellence in Nuclear Physics

Advisor: Christian Iliadis

1:35-1:45 Liz Reeder, Psychology & Neuroscience

Effects of presentation style on the Author Recognition Task

Advisor: Jennifer Arnold

1:45-1:55 Dayton Ellwanger, Physics & Astronomy

Pedagogy of Quantum Computing: An Investigation Into the Feasibility of Teaching Quantum Computing to Undergraduates

Advisor: Jonathan Engel

1:55-2:15 Questions

Narratives of Health: 1:15-2:15 pm
Room 3205

1:15-1:25 Hallie French, English & Comparative Literature
Haunted Houses, Haunted Memories: Embodiment, Reproduction, and Storytelling

Advisor: GerShun Avilez

1:25-1:35 *Presentation withdrawn*

1:35-1:45 Kaylyn Pogson, Biology
The Cancerous Breast

Advisor: GerShun Avilez

1:45-1:55 Mary Glenn Krause, Anthropology
Patrick Livingston Murphy: A Glimpse into An Innovative, Yet Largely Forgotten North Carolinian Mental Healthcare Pioneer

Advisor: Dale Hutchinson

1:55-2:15 Questions

Contemporary Policy Issues
Room 3206

1:15-1:25 Sarah Arney, Philosophy
Open Hearts, Open Minds, Open Doors: Understanding the Debate over the role of LGBT+ Christians in the United Methodist Church

Advisor: Todd Ochoa

1:25-1:35 Emily Venturi, Political Science, and Ana Dougherty,
Economics

Economic Integration of Refugees and Migrants in Armenia

Advisor: Niklaus Steiner

1:35-1:45 Vishnu Ramachandran, Computer Science
False Hope: Body-Worn Cameras as Community Policing in Durham, North Carolina

Advisor: Torin Monahan

1:45-1:55 Sarah Eliza, Journalism & Mass Communication
When Whistleblowers Become Traitors: Approaching Internal Relations in the Intelligence Community from a Psychological Perspective

Advisor: Joseph Cabosky

1:55-2:15 Questions

The Arts in England, 1450-1650: 1:15-2:15 pm
Room 3209

1:15-1:25 Jeremy Howell, History

Masculine Aspirations: Young Men Asserting Masculinity Through Arms & Armor in Tudor Portraiture

Advisor: Tania String

1:25-1:35 William Yoder, English & Comparative Literature

A Narrative of the Life of the Mind: The Engravings of Bacon's Sylva Sylvarum

Advisor: Tania String

1:35-1:45 Grace Ketron, Journalism & Mass Communication

Francis Delaram's Print of Queen Elizabeth: Charles I's Message of Elizabethan Pax

Advisor: Tania String

1:45-1:55 Dana Rodriguez, Art

The Notorious Case of Lady Frances Howard

Advisor: Tania String

1:55-2:15 Questions

This panel session, "The Arts in Tudor England, 1450-1650," includes student projects from a Research Exposure Course taught Fall 2016 by Professor Tania String, Department of Art & Art History.

Research Exposure Courses introduce students to research in a particular discipline by having students complete at least one sustained original research project during the course. The course must include training on developing a research topic, using research methods appropriate to the discipline, and how to communicate the results of their research to others.

Most Research Exposure Courses include assistance from a Graduate Research Consultant. These graduate students are chosen for their expertise in the field or in relevant research methods, and they spend 30 hours over the course of the semester assisting students with research.

In the 2015-2016 school year, 4,292 undergraduate students completed one of 202 GRC courses offered in departments across the university. More than 30,000 students at UNC have participated in these classes since their creation in 2003.

Adaptations & Change: 2:30-3:30 pm
Room 3203

2:30-2:40 Bhairavi Rajasekar, Biology
Analysis of the Effects of Variations in Chemosensory Genes in Drosophila
Advisor: Corbin Jones

2:40-2:50 Emily Watson-Cook, Environmental Science
Characteristics and Classification of Southern Appalachian Spruce-Fir Forests
Advisor: Robert Peet

2:50-3:00 Jasmine Shah, Psychology & Neuroscience
Hedonic Capacity Influences Motivated Behavior in Autism Spectrum Disorder
Advisor: Gabriel Dichter

3:00-3:10: Emily Reckard, Anthropology
Cultivating Belonging: The role of community farming in the lives of refugees from Burma
Advisor: Jocelyn Chua

3:10-3:30 Questions

Social Identity and Social Change: 2:30-3:30 pm
Room 3205

2:30-2:40 Kiley Underhill, Communication Studies
#BuryTropesNotUs: How queer women create online communities to resist unfair representation
Advisor: Alex McVey

2:40-2:50 Jamie Ramos, Information Science
Looking @ the Trolls behind the Screen
Advisor: Leslie Frost

2:50-3:00 Timber Beeninga, Global Studies
The Anti-Apartheid Shanty Protest from 1985 to 1987
Advisor: Lauren Jarvis

3:00-3:10 Erin Lewis, Public Policy
BlackCrime BlueShield: How Race Affects Support of Police Body Cameras
Advisor: Courtney Rivard

3:10-3:30 Questions

Identity and Community Integration: 2:30-3:30 pm
Room 3206

2:30-2:40 Amanda Lalezarian, Journalism & Mass Communication
What is the future of Judaism in Denmark? (A Documentary examining history from the Holocaust in 1943 to modern life in 2016)

Advisor: Charlie Tuggle

2:40-2:50 Sarah Shannon-Mohamed, History
Beyond the Veil: Exploring Issues of Social Adversity Female Muslim Students at the University of North Carolina at Chapel Hill are Faced With While Integrating Into the Fabric of University Life

Advisor: Tommy Ender

2:50-3:00 Makaela Jones, Exercise & Sport Science
Psychosocial Antecedents of Athlete Burnout in Black Student-athletes

Advisor: J.D. DeFreese

3:00-3:10 Leah Bishop, Music
Futebol, Feminismo e Funk

Advisor: David Garcia

3:10-3:30 Questions

Prevention & Treatment of Injury & Disease: 2:30-3:30 pm
Room 3209

2:30-2:40 Shelby Waldron, Exercise & Sport Science
Training's Effect on Burnout Over Time

Advisor: J.D. DeFreese

2:40-2:50 Hannah Price, Exercise & Sport Science
Gender Discrepancies in Persistent Symptom Presentation One-Month Post-Concussion in Youth Athletes

Advisor: Johna Register-Mihalik

2:50-3:00 Kathryn Citrin, Biology
The inhibitory protein PMEPA1, but not SMAD7, inhibits BMP signaling in endothelial cells

Advisor: Victoria Bautch

3:00-3:10 Grant Cabell, Exercise & Sport Science
The Test-Retest Reliability and Exercise-Driven Changes of UCH-L1 in Healthy, Recreationally Active College Students

Advisor: Kevin Guskiewicz

3:10-3:30 Questions

**Are you an undergraduate student at Carolina
who is interested in research?**

Join the Carolina Research Scholar Program!

Carolina Research Scholars are a community of students united by an interest in research and inquiry-driven learning in a variety of fields. It helps guide students in getting involved in research at Carolina, communicating their results to a larger community, and finding ways to use these experiences in careers or further education.

Carolina Research Scholars who successfully meet requirements are recognized with a “Carolina Research Scholar” designation on their transcripts.

All undergraduate students are eligible to join at <http://go.unc.edu/CRSP>.

**Please join us to recognize this year’s graduating
Carolina Research Scholars at 3:45 in the Auditorium**

Undergraduate Research Consultant Team (URCT) Program

This new initiative for 2017-2018 will involve assembling small “strike teams” of undergraduates with complementary skills to engage in projects involving scholarly research, design work, or artistic output. The projects may be faculty-generated or student-generated with faculty mentorship.

The OUR will assemble the URCT teams consisting of 3-5 students drawn from more than one discipline. The teams will work toward a one-semester outcome (e.g., a research report) or product (such as a design, a model, or outreach materials). The URCT will work under the guidance of a Graduate Research Consultant (GRC) and a faculty sponsor.

Look for more information about this new program on the OUR website in coming months.

POSTER SESSIONS

All posters are in the Great Hall adjacent to the information desk.

Odd-numbered posters are in Session I, from 1:15-2:15 pm. Even-numbered posters are in Session II, from 2:30-3:30 pm. Posters are arranged numerically, with posters on similar topics together.

001. Alexis Bigelow (Radiologic Science)
Motherhood versus Womanhood in Iraqi Literature
Advisor: Claudia Yaghoobi

002. Hannah Petersen (Journalism & Mass Communication)
Understanding campus media coverage of sexual assault from a survivor perspective
Advisor: Dr. Anne Johnston

003. Leah Balkoski (English & Comparative Literature)
The Self Reflected: Mirrors in Persian Poetry
Advisor: Claudia Yaghoobi

004. Thomas Savransky (Psychology & Neuroscience)
Imagining Poor People as Black (And What That Means for Poor White People)
Advisor: Kurt Gray

005. Sarah Austin (Asian Studies)
American Palestinian Women and Intersectionality
Advisor: Claudia Yaghoobi

006. Kathryn Townsend (Public Policy)
The U Visa, Domestic Violence, and Law Enforcement Reporting
Advisor: Rebecca Kreitzer

007. Logan Gin (Biology)
Implementation and Evaluation of a fishy CURE: Seafood Mislabeling for Biology Majors
Advisor: John Bruno

008. Sweta Karlekar (Computer Science)
Exploring a Flexible Computational Method for Comparing Massive Interaction Data from Science Visualizations
Advisor: Kelly Ryoo

009. William Carter (Linguistics)
Phonological Activeness Biases in Language Structuring and Acquisition
Advisor: Elliott Moreton

010. Kripa Ahuja (Health Policy & Management)
Molecular cloning involving the AAV-CXCL12 gene
Advisor: JingJing Li

011. Sarah Jeffries (English & Comparative Literature)
Mindfulness in Education and Human Development
Advisor: Michele T. Berger
012. Mitchell Young (Physics & Astronomy)
The Sign Problem in Many Body Physics
Advisor: Joaquin Drut
013. Wanyi Chen (Information Science)
Computer Science Education in US and Chinese High Schools
Advisor: Ryan Shaw
014. Jihane Jadi (Psychology & Neuroscience)
Onset and Time Course of Cognate and Repetition Priming in Spanish-English Bilinguals
Advisor: Peter Gordon
015. Madison Chandler (Psychology & Neuroscience)
Teachers' Use of Cognitive Processing Language (CPL) in Mathematics Instruction
Advisor: Peter Ornstein
016. Jessie Winfree (Sociology)
Accuracy of Early Head Start Child Care Center Attendance: Parent Reports vs Teacher Daily Records
Advisor: Richard Faldowski
017. Brandon Jocher (Chemistry)
The Implementation and Characterization of Coaxial EESI on a Thermo ESI Source
Advisor: Gary Glish
018. Dylan Dutton (Physics & Astronomy)
Skynet Algorithm for Single-Dish Radio Mapping
Advisor: Dan Reichart
019. Mark Molinaro (Computer Science)
Exploring the Efficiency of First-Order Proving Methods
Advisor: David Plaisted
020. Elena Kovalik (Physics & Astronomy)
Modeling optical properties in few-layer intercalated graphene: a Drude model approach
Advisor: Scott Warren
021. Linnea Lieth (Art)
The Waiting and Weeping House: Stories from 250 Years and One Summer
Advisor: Priscilla Layne
022. David Spencer (Mathematics)
Global Existence for a Coupled Wave System related to the Strauss Conjecture
Advisor: Jason Metcalfe
023. Mark Laird (English & Comparative Literature)
Nietzsche, Dionysus, and the Form of Chaos
Advisor: Gregory Flaxman
024. Samir Patel (Mathematics)
Adapting 3D reconstruction software for coral reef structural complexity analysis
Advisor: Karl Castillo

025. Christopher DeFiglia
(Mathematical Decision Science)
Regular Mates of Power Squares
Advisor: Carl Mummert
026. Ricardo Garcia (Computer Science)
Sclerochronological Analysis of Two Contemporary Continental Shelf Bivalves and its Paleoceanographic Significance
Advisor: Joel Hudley
027. Caroline Jasperse (Biology)
Prevalence and Implications of Seafood Mislabeling in Global Seafood Markets
Advisor: John Bruno
028. Omar Nawaz (Physics & Astronomy)
Projection of tropospheric ozone load change from 2010-2040
Advisor: Jason West
029. Gerardo Perez Goncalves (Chemistry)
Cosolutes and the Stability of a Domain-Swapped Dimer
Advisor: Gary Pielak
030. Francesca Peay (Environmental Studies)
The Effect of Dune Height on Beachfront Property Values
Advisor: Laura Moore
031. James Wheeler (Physics & Astronomy)
A Simplistic Analytical Approximation of the Three-Body Contribution to the Neutrinoless Double Beta Decay Transition Matrix Element in Ge-76 and Se-76
Advisor: Jonathan Engel
032. Jessica Boulton (Biology)
Coral and associated symbiont physiologies are resilient to changes in pCO₂ but are negatively affected by temperature stress
Advisor: Karl Castillo
033. Maryam Kazemzadeh-Atoufi (Physics & Astronomy)
Nanoscale Polystyrene Bead Self Assembly for Hierarchical Ordered Photonic Structures for Dye Sensitized Solar Cells
Advisor: Jim Cahoon
034. Lily Olmo (Environmental Science)
*Multi-decadal growth histories of *Siderastrea siderea* and *Pseudodiploria strigosa* throughout the Bocas del Toro Archipelago, Panama*
Advisor: Karl Castillo
035. Max Lowman (Chemistry)
Alternative Molecules for Imaging Carbohydrates
Advisor: Carol Arnosti
036. Bryan Nixon (Biomedical Engineering)
Developing Fragile Environments in an Undeveloped Healthcare Society
Advisor: Brian Hogan
037. Amanda Lohmann (Biology)
Intraspecific chase dynamics in wild, freely behaving dragonflies
Advisor: Tyson Hedrick
038. Martina Savage (Biology)
*Carbon Usage and Gene Sequencing of *Ruegeria pomeroyi**
Advisor: Scott Gifford

039. Tony Bird (Biology)
Three-dimensional measurement of columnar jointing in the Bishop Tuff, Owens River Gorge, California
Advisor: Allen Glazner
040. Kevin Ostrowski (Physics & Astronomy)
Signal Generation and Data Acquisition Using LabVIEW
Advisor: Frank Tsui
041. Karylle Abella (Chemistry)
Salinity-structured and particle-associated variations in bacterial communities and enzymatic activities in the coastal North Atlantic
Advisor: Carol Arnosti
042. Rachel Quindlen (Environmental Science)
Variations in Intertidal Oyster Reef Composition Across Landscapes and Tidal Gradients
Advisor: Tony Rodriguez
043. Kathia Toledo (Environmental Studies)
Analyzing Health and Epigenetic Influences of Refineria Esmeraldas in Esmeraldas, Ecuador
Advisor: Gabriela Valdivia
044. William Larsen (Geology)
Trace Metal Analysis of Drinking Water in Chapel Hill
Advisor: Xiaoming Liu
045. Brooke Benson (Environmental Studies)
*Apparent timing of *Siderastrea siderea* density banding in relation to colony growth and physiology*
Advisor: Karl Castillo
046. Daniela Lopez (Geography)
Making ends meet in Esmeraldas, Ecuador: economic implications of environmental injustice
Advisor: Gabriela Valdivia
047. Kylie Lawrence (Chemistry)
*Quantifying reversible oxidation of proteins thiols in *Chlamydomonas reinhardtii**
Advisor: Leslie Hicks
048. Harry Heyworth & Cordell Corbin (Physics & Astronomy)
Physical Impact of Cancer Cells on the Extracellular Matrix
Advisor: Laurie McNeil
049. Kim Dang (Chemistry)
Fragmentation of Benzyl Pyridinium Salts by Paper Spray Ionization
Advisor: Gary Glish
050. Aihui (Alyssa) Guo (Biology)
CRISPR Screening to Identify DNA Repair Pathways Used During Cancer Therapy
Advisor: Gaorav Gupta
051. Alice Yunzi Yu (Nutrition)
Dietary Trends in Energy, Carbohydrate, Protein, Fat, Sodium and Potassium Intake by Urbanicity Index in Chinese Adolescents from 1991 to 2011
Advisor: Barry Popkin
052. Deekshita Ramanarayanan (Biology)
Characterization of Hepatocyte-Specific CD73 Knockout Mice
Advisor: Natasha Snider

053. Julia Gallini (Biostatistics)
The Effect of Sport on Concussion Knowledge and Attitude in Youth Coaches

Advisor: Johna Register-Mihalik

054. Morgan Andrejchak (Exercise & Sport Science)

Title: The effects of a Symbol Digits Modality Test (SDMT) on jump-landing biomechanics in physically active males and females

Advisor: Darin Padua

055. Adam Aji (Computer Science)

Cooking by the Book: Using Knowledge from the Web to Improve Automatic Video Captioning

Advisor: Tamara Berg

056. Hannah Inman (Biostatistics)

Maternal Death Analysis: Trend Analysis with Rare Events

Advisor: Jane Monaco

057. Lynde Wangler (Psychology & Neuroscience)

Optogenetic Manipulation of Corticostriatal Pathways in Pavlovian Conditioned Approach

Advisor: Donita Robinson

058. Rachel Uri (Psychology & Neuroscience)

Effects of Autonomic Reactivity on the Relationship Between Racial Discrimination and Anxiety

Advisor: Jean-Louis Gariépy

059. Heta Desai (Chemistry)

Development of an Enzyme Sensor for Reactive Oxygen Species

Advisor: Eric Brustad

060. Manisha Mishra (Biology)
Cytochalasin D Stimulates MAP Kinase Phosphorylation and MMP-13 Release in Normal Human Chondrocytes

Advisor: Richard Loeser

061. Luke Soliman (Chemistry)

The Development and Biodistribution of an antiCD3-F(ab')₂ Radiotracer for PET/CT Imaging

Advisor: Matthew Parrott

062. Moza Hamud (Biology)

Familial ALS Associated Mutations Cause Neurotoxicity in the Motor-Neuron-like Model NSC34

Advisor: Mohanish Deshmukh

063. Anne Feng (Biology)

Novel mutant-specific siRNAs induce selective mutant KRAS knockdown

Advisor: Chad Pecot

064. Olivia Anderson (Biology)

An Analysis of Limited Sanitation, Health Behavior, and Implementation of Health Education in Villa El Salvador, Peru

Advisor: Karin Yeatts

065. Corey Ochs (Romance

Languages)

Performance Analysis of National Football League Quarterbacks after Sustaining a Concussion

Advisor: Johna Register-Mihalik

066. Emily Bass (Psychology &

Neuroscience)

Client Predictors of the Therapeutic Alliance in Individual Resiliency Training

Advisor: David Penn

067. Rachael Kang (Psychology & Neuroscience)

How blue-light blocking glasses affects recovery from jetlag

Advisor: Rachael Kang

068. Ian Schlup (Chemistry)

Optimizing Differential Ion Mobility-Mass Spectrometry based Leukemia Antigen Detection

Advisor: Gary Glish

069. Sarah Carter Jessup

(Psychology & Neuroscience)

Anxiety Sensitivity and Post-Traumatic Stress Symptoms in Sexual Assault Survivors

Advisor: Jon Abramowitz

070. Aditya Anerao (Chemistry)

Distinguishing Isomeric Hexose Derivatives using Mass Spectrometry

Advisor: Gary Glish

071. Elizabeth Thompson (Exercise & Sport Science)

The Relationship Between Caloric Intake and Body Composition in Shift-working Healthcare Employees

Advisor: Abbie E. Smith-Ryan

072. Gabrielle Smith (Exercise & Sport Science)

Associations between mechanical loading and femoral cartilage deformation in healthy individuals

Advisor: Brian Pietrosimone

073. Turner Wibbelsman (Biology)

Comorbid medical conditions in North Carolina Prostate Cancer Patients

Advisor: Ronald Chen

074. Shawn Ahuja (Exercise & Sport Science)

Characterization of bariatric surgery patients: evaluation of body composition and metabolism

Advisor: Abbie Smith-Ryan

075. Shrey Patel (Chemistry)

Signaling effects of PI3K and MEK inhibitors in mutated PIK3CA gliomas

Advisor: C. Ryan Miller

076. Katlyn McKay (Psychology & Neuroscience)

Neural Correlates of Stress Predict Future Crack/Cocaine Use

Advisor: Stacey Daughters

077. Amelia Bruce (Exercise & Sport Science)

The Association Between Lower Extremity Muscle Mass and Muscle Tissue Loading

Advisor: Darin Padua

078. Archita Chandra (Psychology & Neuroscience)

Respiratory Sinus Arrhythmia Predicts Future Infant Sleep Quality and Emotional Reactivity to Stress

Advisor: Cathi Propper

079. Claire Storey (Biology)

Determining tropism of recombinant adeno-associated viral vectors in vivo

Advisor: Dan McKay

080. Anne Worth (Chemistry)

Effect of Solvent Choice on Pyrolyzed Cellulose Analysis Using Coaxial EESI-MS

Advisor: Gary Glish

081. Noah Crees (Biology)
Mechanism of Trypanosoma brucei Movement across the Blood-Brain Barrier
Advisor: Keith Burridge
082. Joshua Simpson (Chemistry)
Antioxidant Activity of Novel Probiotics
Advisor: Jason Arnold
083. Colleen Watson (Psychology & Neuroscience)
Neural Signatures of Affective Processing in PTSD
Advisor: Aysenil Belger
084. Hannah Shoaf (Physics & Astronomy)
Noninvasive Monitoring of Blood Glucose Levels
Advisor: Sean Washburn
085. Hasan Mustafic (Psychology & Neuroscience)
Suppressing Sympathetic Nervous System Activity and Appraisals of Stress: Implications for Depression
Advisor: Keely Muscatell
086. Destinee Grove (Exercise & Sport Science)
Athlete Perceptions of the Concussion Assessment Battery
Advisor: Johna Register-Mihalik
087. Melissa Nance (Psychology & Neuroscience)
How Well Do Cognitive and Metacognitive Models Predict Obsessive-Compulsive Symptoms?
Advisor: Jonathan Abramowitz
088. Lin Cao (Biology)
Purification and structural characterization of a novel bacterial LMF1 homolog
Advisor: Saskia Neher
089. Karthika Kandala (Biology)
The Effect of an miRNA Sponge on miR-124 Target Tumor Suppressors
Advisor: Greg Matera
090. Rachel Lerner (Psychology & Neuroscience)
The Impact of Infant Sleep Location and Mother Bed-Sharing Intent at 3 Months on Infant Still-Face Paradigm Responses at 6 Months
Advisor: Cathi Propper
091. Ashish Khanchandani (Biology)
Effects of Physiological Loading on the Achilles Tendon Moment Arm
Advisor: Jason Franz
092. Hunter Byrd (Exercise & Sport Science)
The Association Between Body Composition and Lower Extremity Biomechanics in College Aged Female Athletes
Advisor: Darin Padua
093. Terri Long (Psychology & Neuroscience)
Depression Treatment Interventions among African Americans Living with HIV: A Systematic Review
Advisor: Donaldson Conserve
094. Sophia Rowland (Psychology & Neuroscience)
Relations Among Maternal Distress, Bedtime Practices, and Infant Sleep Quality
Advisor: Cathi Propper

095. Reagan Page (Exercise & Sport Science)

The Role of Sport and Location of Impact on Initial Concussion Presentation for Adolescent Student-Athletes Reporting to a Family Practice Clinic

Advisor: Johna K. Register-Mihalik

096. Kyle Wallace (Exercise & Sport Science)

Infrapatellar Fat Pad Volume and Osteoarthritic Symptoms Following ACL Reconstruction

Advisor: Brian Pietrosimone

097. Addie Humphrey (Psychology & Neuroscience)

An Investigation of Changes in Eating Behaviors before Alcohol Consumption in College Students

Advisor: Melissa Munn-Chernoff

098. Emilie Kadhim (Geography)

Adolescent Demographics and Geographic Location Associated with Depression: Which adolescents are most likely to be depressed?

Advisor: Tamera Coyne-Beasley

099. Rand Khasawneh (Nutrition)

The effect of estrogen levels on antibody response to the flu vaccine in obese and non-obese post-menopausal women

Advisor: Melinda Beck

100. Leslie Sierra-Arévalo (Exercise & Sport Science)

Ultrasonography assessment of femoral cartilage thickness deformation acutely following drop landings

Advisor: Brian Pietrosimone

101. Sukriti Bagchi (Chemistry)

Investigating the metastatic potential of GM-CSF and Rab27a in KRAS driven pancreatic ductal adenocarcinoma

Advisor: Yuliya Pylayeva-Gupta

102. Alison Bonner (Biology)

Defining roles for the oncogenic kinase Abl and its substrate Crk in embryonic development

Advisor: Mark Peifer

103. Stephanie Okonmah-Obazee (Psychology & Neuroscience)

The Role of the Vagus Nerve in the Sleep States of Premature Infants

Advisor: Greg Lewis

104. Emily Peluso (Biology)

Characterization of the diadenylate cyclase DisA in the bacterium Clostridium difficile

Advisor: Rita Tamayo

105. Miranda Sullivan (Biology)

Using Eyetracking to Evaluate Social Skills Treatment for Autism

Advisor: Gabriel Dichter

106. Meredith Park (Chemistry)

The relationship between health literacy and patient-physician communication on receipt and quality of discharge instructions prior to hospital discharge: a pilot study

Advisor: Amy Weil

107. Eugenia Luc (Chemistry)

Palladium catalysed synthesis of stereodefined alkenyl boronate esters

Advisor: Simon Meek

108. Megan Hale (Exercise & Sport Science)

Mechanisms Leading to Catastrophic Sport Injury in Gymnastics

Advisor: Kristen Kucera

109. Jennifer Lyu (Nutrition)

The facilitators and barriers to meal-planning strategies among type-1 diabetes patients in Beijing, China

Advisor: Elizabeth Mayer-Davis

110. Zain Syed (Exercise & Sport Science)

Quadriceps/Hamstring Co-activation during walking following Anterior Cruciate Ligament Reconstruction

Advisor: Troy Blackburn

111. Sean Buitendorp (Exercise & Sport Science)

The Relationship Between Vibratory Perception Threshold, Joint Position Sense, and Loading Rate During Walking Gait in ACLR Individuals

Advisor: J. Troy Blackburn

112. Kathleen Morrisroe (Exercise & Sport Science)

The Effect of Headgear on Visual and Sensory Performance Outcomes in Female Lacrosse Players

Advisor: Jason Mihalik

113. Archita Chandra (Psychology & Neuroscience)

C-SURF 2016: Emotional and Cognitive Predictors and Outcomes of Infant Sleep Quality at 3 Months of Age

Advisor: Cathi Propper

114. Kathleen Connell (Exercise & Sport Science)

The Effects of Movement Profile on Biochemical Markers of Internal and External Training Load Response to Controlled High-Intensity Exercise in Young, Physically Active Females

Advisor: Darin Padua

115. Anika Khan (Psychology & Neuroscience)

Emotion Language Development in Young Children

Advisor: Kristen Lindquist

116. Savannah Dennis (Exercise & Sport Science)

Severe Cheerleading Injuries Seen in a Sample of United States Emergency Departments from 2003-2015

Advisor: Kristen Kucera

117. Sulgi Kim (Chemistry)

Discovering Novel Chemosensitizing Drugs Targeting Dicer Protein

Advisor: Scott Hammond

118. Samantha Hammock (Exercise & Sport Science)

The Association Between Peak Knee Adduction Moment and Medial Femoral Articular Cartilage Deformation Following Walking

Advisor: Brian Pietrosimone

119. Kyle Riker (Chemistry)

FKBP5 variant rs3800373 alters FKBP5 RNA secondary structure and prevents stress-induced miRNA-320a downregulation of FKBP5, resulting in glucocorticoid resistance and increased vulnerability to chronic posttraumatic pain

Advisor: Sarah Linnstaedt

120. Ellie Scialabba (Psychology & Neuroscience)

The Effects of Goal Progress and Means Variability on Goal Pursuit

Advisor: Steven Buzinski

121. Eric Brandon Kelly (Psychology & Neuroscience)

Stress-enhanced fear learning: an animal model for studying post-traumatic stress disorder in male and female subjects

Advisor: Donald Lysle

122. Madison Butler (Biology)

The Role of PIK3CA Mutations in Gliomagenesis and Response to Kinase Inhibitors

Advisor: C. Ryan Miller

123. Chloe Bryen (Psychology & Neuroscience)

Relationships among Chronic Pain, Hypervigilance and Executive Function

Advisor: Mark Hollins

124. Daniel Farrell (Exercise & Sport Science)

The Association Between Walking Biomechanics and Compartmental Femoral Cartilage Deformation

Advisor: Brian Pietrosimone

125. Katherine Murdoch (Chemistry)

Identification of Sweeteners in E-liquids by Electrospray Ionization Mass Spectrometry

Advisor: Gary Glish

126. Corryn Chaimowitz (Psychology & Neuroscience)

Alpha-1 Adrenergic Receptor Agonism in the Lateral Hypothalamus may Blunt Voluntary

Binge-like Ethanol Consumption in Mice

Advisor: Todd Thiele

127. Sofia Ocegueda (Psychology & Neuroscience)

Association of Friends and Family Support with Depression in Adolescents

Advisor: Dr. Tamera Coyne-Beasley

128. April Hamer (Biology)

Surgical Exposure of the External Carotid Artery for Potential Bypass with Progressive Exposures

Advisor: Adam Zanation and Corey Johnson

129. Ayushi Deshwal (Exercise & Sport Science)

Increased mucus concentration reduces airflow-mediated clearance in an in vitro model of cough clearance

Advisor: Brian Button

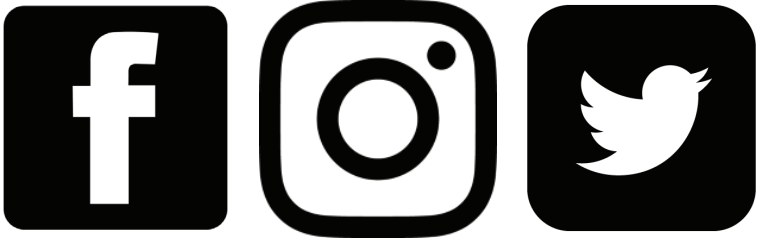
130. Jonathan Lynn (Computer Science)

Evaluation of Optimizations Achieved through Cloud-based Motion Planning

Advisor: Ron Alterovitz

131. Luke Fernandez (Computer Science)
Rendering an In-browser, 360-Degree Environment from Disjoint Live Camera Feeds
Advisor: Diane Pozefsky
132. Dayton Ellwanger (Computer Science)
An Architecture for Supporting Opportunistic Collaboration
Advisor: Prasun Dewan
133. Moza Hamud (Biology)
Shrimp Mislabeling on the North Carolina Coast
Advisor: Blaire Steinwand
134. Erin Conn (Physics & Astronomy)
Searching for planetary transits with Evryscope and BLS
Advisor: Nicholas Law
135. Grace Tan (Biology)
Are You Eating What You Think You're Eating? Seafood Mislabeling in Chapel Hill-Carrboro
Advisor: John Bruno
136. Mark Tierney (Physics & Astronomy)
Nearby (25 pc) Stellar Companion Search
Advisor: Nick Law
137. Nathalie Eegholm (Biology)
Quantifying Seafood Mislabeling in the Chapel Hill-Carrboro Area
Advisor: Blaire Steinwand
138. Paige Trexler (Biology)
*Comparison of Antioxidant Concentrations in *Portulaca oleracea* Between Two Growth Conditions*
Advisor: Nita Eskew
139. Robert Stewart (Biology)
Effects of corticosterone exposure on alcohol drinking in self-administration trained male vs female rats
Advisor: Joyce Besheer, Ph.D.
140. Xuelan Wu (Chemistry)
Discovery of novel antimicrobial peptides from medicinal herbs using PepSAVI-MS
Advisor: Leslie Hicks
141. Jamie Rose (Chemistry)
*Antioxidant Activity in Various Parts of *Portulaca oleracea**
Advisor: Nita Eskew
142. Rachel Barndt (Psychology & Neuroscience)
Effects of food restriction on acquisition of alcohol self-administration
Advisor: Joyce Besheer
143. Mallory Croley (Biology)
*Optimization of an antioxidant extraction procedure for *Portulaca oleracea* using ultrasonication*
Advisor: Nita Eskew
144. Kalyann Van Voorhies (Biology)
Functional Role of the Insular Cortex and Nucleus Accumbens Core in Modulating Alcohol Self-Administration
Advisor: Joyce Besheer
145. Grace Guo (Biology)
*Evaluation of Antioxidant Levels of Red and Golden Purslane (*Portulaca oleracea* L)*
Advisor: Nita Eskew

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AWARD & RECOGNITION CEREMONY

3:45 pm • Auditorium

Welcome

Dr. Troy Blackburn, Professor of Exercise and Sport Science and Associate Dean and Director of Office for Undergraduate Research

Keynote Speaker

*Dr. James W. Dean, Jr.
Executive Vice Chancellor and Provost*

Recognition

Dr. Troy Blackburn
Ms. Monica Richard, Interim Associate Director
Symposium Poster Award Winners
Graduate Student Mentors
Graduating OUR Ambassadors
Carolina Research Scholars

Closing Remarks

Award Descriptions

Poster Awards:

These awards recognize the best posters presented at the 2016 Celebration of Undergraduate Research. Presenters are evaluated on the content of their posters, the poster design, and how students respond to questions about their research during the poster session.

Graduate Student Mentor Award:

This award recognizes the support, perspective and motivation that the graduate student brings to the undergraduate's experience.

OUR Ambassadors:

OUR ambassadors are undergraduate researchers who promote a culture of research on UNC's campus and help their peers gain research exposure.

Carolina Research Scholar Program:

Carolina Research Scholars have completed varied research intensive coursework, culminating in a presentation of their research at an academic or professional conference.

THANK YOU!

We greatly appreciate the support of the Carolina Parents Council and The Roosevelt Institute for the 2017 Celebration of Undergraduate Research.

**Graduate Student
Mentor Award**

Shannon Blakey
Rachel Greene
Cassandra Hayne
Carter Smith

Haiwei Chen
Kathryn Citrin
Kathleen Connell
Akshay Daji
Snigdha Das
Laura Diez
Hallie French

Austin Gragson
Destinee Grove
Tracie Hayes
Rachel Hill

Caroline Jasperse
Jennifer Jensen
Leah Johnson

Makaela Jones
Priyenka Khatiwada
Arvind Krishnamurthy

Adam Kunesh
Mark Laird Laird
Alexander Li
Michael Lin

Zachary Locklear
Ryan Lupo

Aakash Mehta
Lucas Nielsen

Stephanie Okonmah-
Obazee

Gerardo Perez-goncalves
Jennifer Perry

Milena Protti

Emily Reckard

Austin Rick

Dana Rodriguez

Taruni Santanam

Anita Simha

Melvin Soh Chin Aik

Danielle Spitzer

Claire Storey

Katarina Swaim

Enrique Toloza

Madeleine Valier

Christopher Wang

Emily Watson-Cook

Daniel Zeitouni

Ottavia Zattra

OUR Ambassadors

Verda Erin Agan
Amanda Carew
Steven Doerstling
Jeet Patel
Kaylyn Pogson

**Carolina Research
Scholars**

Morgan Andrejchak
Timber Beeninga
Joshua Blair
Amelia Bruce
Grant Cabell
Andrew Castro
Corryn Chaimowitz

**The Office for Undergraduate Research aims to expand the
opportunities for undergraduates to engage in research
and mentored scholarship at UNC-Chapel Hill.**

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The Office for Undergraduate Research aims to expand the opportunities for undergraduates to engage in research and mentored scholarship at UNC-Chapel Hill.

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