Dear Students, Faculty, Staff and Visitors,

Welcome to the 2014 Celebration of Inquiry. The Celebration of Inquiry is a celebration of creative inquiry and creative expression by the Coastal Carolina University community. The 2014 Celebration of Inquiry will celebrate the human spirit, its strength, its resiliency, and its grace. American stage and film actor, director, and producer George C. Scott famously said that, “The human spirit is stronger than anything that can happen to it.” Indeed, from the American Revolution to the Arab Spring people have bravely struggled against oppression and injustices – their spirit shining like stars on a dark night.

This year, the Celebration of Inquiry will include a presentation by Terry F. Pettijohn II, the 2014 HTC Distinguished Teacher-Scholar Lecturer; a panel discussion by the distinguished keynote and plenary speakers; a keynote address by Coach Joe Moglia; three plenary speaker presentations, as well as an array of presentations, panels, workshops, exhibits and discussions by students, faculty, staff and visitors. The annual CCU Undergraduate Research Competition, which celebrates the accomplishments of our undergraduate researchers and provides a venue for the dissemination of their work, also will be included as part of the Celebration of Inquiry. The Celebration of Inquiry will feature two concerts – the Songwriters of the Strand Festival, which will celebrate local songwriters and singers, and the David Bankston and Friends concert, which will showcase performances by David Bankston and musical guests.

I would like to thank all the presenters and performers for preparing sessions and sharing their work. I would also like to thank Jean Ann Butler, Nyoka Hucks, Deborah Lauria and Rita Smith for all their work as members of the Logistics Committee for the Celebration of Inquiry. The Celebration of Inquiry could not have happened without the work of Conference Services, ARAMARK, Media Services, ITS, Wheelwright’s technical crew, University Communication, Brian Roessler, who organized the Songwriters of the Strand Festival, and many volunteers. Finally, I would like to thank the faculty and administration at Coastal Carolina University for supporting the Celebration of Inquiry and for helping to bring it to life. Thank you for participating in the 2014 Celebration of Inquiry and I wish you an enjoyable and educational experience.

Sincerely,

Yoav Wachsman
Associate Professor of Economics
Director for the Celebration of Inquiry
The Undergraduate Research Competition

Tuesday, April 1 • 2 to 5 p.m.
Wednesday, April 2 • 9 a.m. to 3 p.m.
Brittain Hall

Multidisciplinary

The Annual CCU Undergraduate Research Competition will be held Tuesday, April 1 and Wednesday, April 2 as a component of the Celebration of Inquiry. The competition celebrates the accomplishments of our undergraduate researchers and provides a venue for the dissemination of their work. Undergraduate research includes original research, scholarship or creative works within an academic discipline. Presentations and posters will be judged within disciplinary categories and the top presentations for each category will win cash awards. The competition will take place in Brittain Hall.

Celebration of Inquiry Keynote Address

Tuesday, April 1 • 7 to 8:30 p.m.
Wheelwright Auditorium

Multidisciplinary

Joe Moglia
Keynote Speaker

Joe Moglia is head coach of Coastal Carolina University’s football team and Chairman of the Board at TD Ameritrade.

In his first season at CCU, playing the toughest schedule in school’s history, Moglia led his team to a conference championship, Division I Playoffs, was Conference Coach of the Year and a finalist for National Coach of the Year. In his second year as a coach, the Chanticleers won the Big South Conference, defeated two opponents in the playoffs and were nationally ranked in the top ten.

This is Moglia’s 21st season as a football coach, but it’s not a traditional 21 years. He began his career as a coach for 16 years, moved to the business world for more than 20 years, and then back to coaching in 2009. In his first stint as a coach he won two Ivy League Championships as the defensive coordinator at Dartmouth, led units that set defense and kicking records at Lafayette, and turned two high school programs around. Before coming to CCU, he was executive advisor for football at Nebraska where he received the Sharp Trophy for Leadership, as voted on by the players, was part of two Holiday bowls, and two Big 12 North Championships. In 2011 he was head coach of the Omaha Nighthawks in the UFL where he competed against NFL icons Marty Schottenheimer, Jim Fossil and Denny Green.

In the business world, Moglia was at Merrill Lynch for 17 years before becoming the CEO at TD Ameritrade in 2001. By 2008, in the midst of a global financial crisis, the firm had its sixth record year in a row, grew its market cap from $700 million to $10 billion, and shareholders enjoyed a 500 percent financial return. In 2008, he stepped down as CEO, became chairman of the board and returned to football. Moglia has received the Ellis Island Medal of Honor and has been honored by the National Italian American Foundation, the Columbus Citizens Foundation and the American Institute for Stuttering. He has been inducted into three Halls of Fame, is the recipient of two Honorary Doctorates and is also the only author to have written books published on both investing and football.

For tickets, contact the Wheelwright Box Office at 843-349-ARTS (2787).

HTC Distinguished Teacher-Scholar Lecture

Monday, March 31 • 7 to 8:30 p.m.
Johnson Auditorium (Wall Building)

Multidisciplinary

Terry F. Pettijohn II

The 2014 HTC Distinguished Teacher-Scholar is Terry F. Pettijohn II, associate professor of psychology in the Department of Psychology and Sociology. Pettijohn is a consistently high performer when measured by student evaluations and his annual evaluations by the department chair. He mentors many student researchers not only in his Senior Thesis course but also in multiple independent studies. As psychology program coordinator
Within the department, Pettijohn is leading program planning and assessment, quality enhancement courses development, and multiple other initiatives to strengthen and build the psychology program.

Pettijohn’s proposed project is on how social and economic conditions influence our social preferences through the Environmental Security Hypothesis. Particular focus will be on the topic of pop music and how our musical preferences are shaped by the current events in our culture.

**Plenary Speakers**

- **Eric Brown**  
  **Ethics & Environment**  
  *Tuesday, April 1 • 4 to 4:50 p.m.*  
  *Johnson Auditorium (Wall Building)*

  Eric Brown is associate professor of philosophy at Washington University in St. Louis. He specializes in the philosophy of the ancient world, especially that of Greece and Rome. In many articles and in a forthcoming book, Stoic Cosmopolitanism, he explores the ancient Stoic idea that one should live as a citizen of the world. He has also written extensively on ancient Greek views on happiness and the good life (eudemonia) and on Plato, especially the Republic.

- **Winona LaDuke**  
  **Society & Gender**  
  *Wednesday, April 2 • 10 to 10:50 a.m.*  
  *Johnson Auditorium (Wall Building)*

  Winona LaDuke is a Native American land rights activist, environmentalist, economist, politician and an author. At the age of 18, LaDuke spoke to the United Nations regarding Native American concerns. After graduating from Harvard, she moved to the White Earth Ojibwe reservation in Minnesota, where she became involved in a lawsuit to recover lands promised to the Anishinaabeg people by an 1867 federal treaty and later founded the White Earth Land Recovery Project.

  In 1985, LaDuke established the Indigenous Women’s Network, a group devoted to empowering Native Women to participate in political, social and cultural processes. In 1994, she was nominated by *Time Magazine* as one of the country’s 50 most promising leaders under the age of 40. In 1998, Ms. Magazine named her Woman of the Year, and in 2007, she was inducted into the National Women’s Hall of Fame. In 1996 and again in 2000, she was a vice presidential candidate, joining Ralph Nader on the Green Party ticket. A mother of three, LaDuke has written extensively on Native American and environmental issues.

- **Nikky Finney**  
  **Arts & Humanities**  
  *Wednesday, April 2 • 4 to 4:50 p.m.*  
  *Johnson Auditorium (Wall Building)*

  Nikky Finney was born in South Carolina, within listening distance of the sea. A child of activists, she came of age during the Civil Rights and Black Arts Movements. At Talladega College, nurtured by Hale Woodruff’s *Amistad* murals, Finney began to understand the powerful synergy between art and history. Finney has authored four books of poetry: “Head Off & Split” (2011); “The World Is Round” (2003); “Rice” (1995); and “On Wings Made of Gauze” (1985). The John H. Bennett Jr. Chair in Southern Letters and Literature at the University of South Carolina, Finney also authored Heartwood (1997), edited “The Ringing Ear: Black Poets Lean South” (2007), and co-founded the Affrilachian Poets. Finney’s fourth book of poetry, “Head Off & Split” was awarded the 2011 National Book Award for poetry.

**Opening Panel**  
**on The Human Spirit**  
*Tuesday, April 1 • 12:30 to 1:45 p.m.*  
*Wheelwright Auditorium*

This panel will discuss the human spirit, its strength, its resiliency and its grace. The panelists are Joe Moglia (keynote speaker), Eric Brown (plenary speaker), Winona LaDuke (plenary speaker) and Nikky Finney (plenary speaker). The panel will include time for questions and discussion with the audience.

*For ticket information, please contact the Wheelwright Box Office at 843-349-ARTS (2787).*

**Lyrical Lunch**  
*Wednesday, April 2*  
*11:30 a.m. to 1:30 p.m.*  
*Starbucks Café, CINO Grille and Einstein Bros. Bagels*

Come and listen to local singers perform original and cover songs around the campus. The Lyrical Lunch will take place at Coastal Carolina University in Starbucks Café, CINO Grille and Einstein Bros Bagels, with the artists rotating among these locations. This year the Lyrical Lunch will feature Dan Barnhart, Fair, Alex Lawson and Scott Pleasant. These songwriters/singers will also perform during the Songwriters of the Strand Festival on April 2 at 7 p.m. in Wheelwright Auditorium.
Songwriters of the Strand Festival

Wednesday, April 2 • 7 to 8:30 p.m.
Wheelwright Auditorium
Multidisciplinary

This festival celebrates songwriting and singing in the Grand Strand of South Carolina. The Songwriters of the Strand Festival will feature four or five local artists who will perform original songs they have written. These songwriters will also perform during the Lyrical Lunch on Wednesday, April 2, from 11:30 a.m. to 1:30 p.m. at various venues around campus.

For ticket information, please contact the Wheelwright Box Office at 843-349-ARTS (2787).

This year the Songwriters of the Strand Festival will feature the following artists:

**Dan Barnhart**
Dan Barnhart is a Conway singer-songwriter who found his way to the Grand Strand from Ashton, Md. Stylistically, he pulls from country greats such as Johnny Cash to new folk and roots acts such as Mumford and Sons. Baranhart, along with his daughter Kasey, was the winner of the first Muse on the Waccamaw Songwriting Contest and has graced stages throughout the eastern part of the United States.

**Alex Lawson**
“*The trip from Gitchee-Gumee went like a dream...*” and Alex Lawson brought his self-styled guitar playing, vibrant singing and eclectic song-writing to the South. With an always-affable smile and moods that alternate from silly to soul-searching, Lawson entertains audiences with a combination of laughter and thought. His original songs are fresh and interesting; his renditions of old favorites are inventive. Rumors that Bob Dylan is his uncle are indeed false, as is the greatly incorrect belief that he is Alice Cooper's godchild. The Yellow Dog River and the sounds of Detroit echo in his music.

**Fair**
Having grown up in a musical home, it was only a matter of time before sisters Liz and Cynthea Kelley fabricated this unique project. Fair combines fingerstyle acoustic guitar with blending harmonies. With both being songwriters, the lyrical and musical styles are just different enough to be complementary. Although these sisters have been singing together since the ages of three and six, Fair was birthed in the summer of 2011. In February of 2013, Fair was named Artist of the Month by Grand Strand Arts. Fair has played on the acoustic stage for the Carolina ZombieWalk at the House of Blues, as guest artists for the Grand Strand Choir Challenge in Wheelwright Auditorium, as well as many shows in intimate coffee house settings. They directed the music at Camp Vineyard 2013 and will be directing it again in summer of 2014. They recently released their first EP, “Let Us Go,” and are currently writing for their next project. Fair plans to continue to perform live shows, as well as write and record new material. With vigor parallel to their young ages, the Kelley sisters plan to work toward their ambitions wholeheartedly. Liz studies Classical Guitar Performance at Coastal Carolina University, and Cynthea will be joining in the fall of 2014. Both have every intention to continually pursue music through an education, as a career and as a passion.

**Scott Pleasant**
Scott Pleasant has played and written music most of his life, and during his time at Coastal Carolina University, he has served as the composer and/or musical director for six productions by the Department of Theatre. His ongoing musical obsession with the ukulele began more than 10-years ago when he was asked to sing for a little girl in the hospital and the only instrument around for accompaniment was a cheap soprano uke. For a number of years, he organized a popular Celebration of Inquiry session on the history and culture of the uke that included faculty, staff and students, as well as community members and professional musicians from the Carolina Opry. In 2014, his love for and appreciation of the uke continues to grow, and he is pleased to share the sounds of the world’s happiest instrument today.

David Bankston & Friends Concert

Thursday, April 3 • 7:30 to 9 p.m.
Wheelwright Auditorium
Multidisciplinary

David Bankston and musical guests perform selections from his new album, “Here You Are: a retrospective.” It includes selections from “Galvez Town” and “Jazz Blues Gospel Shoes,” plus new songs.

For ticket information, please contact the Wheelwright Box Office at 843-349-ARTS (2787).
Monday, March 31

2014 HTC Distinguished Teacher-Scholar Lecture

Monday • 7 to 8:30 p.m.
Johnson Auditorium

Multidisciplinary
Terry F. Pettijohn II

Tuesday, April 1

Opening Panel on The Human Spirit

12:30 to 1:45 p.m. • Wheelwright Auditorium
Multidisciplinary
Joe Moglia (keynote speaker), Eric Brown (plenary speaker), Winona LaDuke (plenary speaker), Nikky Finney (plenary speaker)

A1. Tuesday • 2 to 3:15 p.m. • Wall 318
How’s Your Thinking? Moving From Surface Level to Deep Waters for Career Success
Business & the Economy
Arlise McKinney, Janice Black, J. Kay Keels

A2. Tuesday • 2 to 3:15 p.m. • Wall 322
The Human Spirit Revisited: A Retrospective of Selected Keynote Speakers and Thematic Ideas of the COI
Multidisciplinary
Charmaine Tomczyk

A3. Tuesday • 2 to 3:15 p.m. • Wall 317
Out of Africa: The Promise of Hope
Multidisciplinary
Fredanna A.D. M’Cormack, Richard Aidoo, Danielle DeTrude, Sadara Shine

A4. Tuesday • 2 to 3:15 p.m. • Wall 308
Resort Planning
Business & the Economy

A5. Tuesday • 2 to 3:15 p.m. • Wall 210
Are We Alone: Do We Want to Be Alone?
Science & Technology
Louis Rubbo

A6. Tuesday • 2 to 3:15 p.m. • Wall 309
Everything You Wanted to Know about Graduate School in the Sciences, But Were Afraid to Ask...
Science & Technology
William M. Jones, Michael Pierce, John Vaness, Miranda Brenneman, Robert Jenkot, Keshav Jagannathan

A7. Tuesday • 2 to 3:15 p.m. • Wall 225
Autoimmunity: Science and Experience
Science & Technology
Michelle Barthet, Tianyi Wu, Stephanie Whiteside

A8. Tuesday • 2 to 3:15 p.m. • Wall 206
Cryptocurrencies: To the Rescue!
Science & Technology
Daniel McDonough

A9. Tuesday • 2 to 3:15 p.m. • EHFA 252
The Multiple Facets of Sexual Violence in Society
Society & Gender
Hephizbath Strmic-Paw, Debbie Perkins, Sixto Ruiz, Erika Moreno, Bevelyn Mitchell, Quinn Backus, Emily Porter

A10. Tuesday • 2 to 3:15 p.m. • EHFA 246
What Freddie Mercury and Billy Joel Taught Me
Arts & Humanities
Mark Mitchell

A11. Tuesday • 2 to 3:15 p.m. • EHFA 247
‘O God, Where Art Thou?’: Joseph Smith
Arts & Humanities
Paul C. Peterson

A12. Tuesday • 2 to 3:15 p.m. • EHFA 256
The New Smoking Policy
Ethics & the Environment
Michael Triana

A13. Tuesday • 2 to 3:15 p.m. • EHFA 251
Adventure Time and Time
Arts & Humanities
Ron Green, Mary Green

AB1. Tuesday • 2 to 4:45 p.m. • Wall Boardroom
Opportunities Event
Multidisciplinary
Patience Locke, Lori Patterson

B1. Tuesday • 3:30 to 4:45 p.m. • Wall 210
Reinforcing Your Boat: Skills to Strengthen the Team and Increase its Efficiency
Business & the Economy
J. Kay Keels, Janice A. Black
Plenary Speaker

Tuesday • 4 to 4:50 p.m.
Johnson Auditorium

Ethics & the Environment

Eric Brown

Keynote Address

Tuesday • 7 to 8:30 p.m.
Wheelwright Auditorium

Multidisciplinary

Joe Moglia

Wednesday, April 2

C1. Wednesday • 9 to 9:50 a.m. • Wall 308

A Game of Man and Nature
Science & Technology

Charles Thompson, Malorie Williams

C2. Wednesday • 9 to 9:50 a.m. • Wall 210

Defining Global Citizenship Through Multiple Lenses
Multidisciplinary

Darla Domke-Damonte, Dan Abel, Deborah Perkins, Nils Rauhut, Jamia Richmond, Holley Tankersey

C3. Wednesday • 9 to 9:50 a.m. • Wall 318

Stigma and Mental Illness
Multidisciplinary

S.H.O.R.E. Peer Educators, Sonovia A. Harmon, Robert Bladwin

C4. Wednesday • 9 to 9:50 a.m. • Wall 309

Supercomputing and Nuclear Weapons: Looking at the Tail of Scale
Science & Technology

William M. Jones

C5. Wednesday • 9 to 9:50 a.m. • Wall 206

Going Back To High School, The Transition From College Student to Classroom Teacher
Education & Human Development

Austin M. Hitt

C6. Wednesday • 9 to 9:50 a.m. • EHFA 247

The Value of PHIL 101
Arts & Humanities

Emily M. Crookston, Anthony Craig, Samuel Jordan, C.J. Garling, Devin Austin, Tyler Marsh, Michael Donaldson, Trevor Scott, Samantha Turano

C7. Wednesday • 9 to 9:50 a.m. • EHFA 152

Building Community Through the Arts I
Arts & Humanities

Eva Kort, Stephanie Danker, Sommersill Tarabek
<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event Description</th>
</tr>
</thead>
</table>
| C8. Wednesday • 9 to 9:50 a.m. • EHFA 256 | One Hot Sentence After Another  
Arts & Humanities  
Gwendolyn Schwinke | |
| C9. Wednesday • 9 to 9:50 a.m. • EHFA 246 | For The Better of Our Families:  
Reframing Communication  
Society & Gender  
O’Sheyree’ Priolequ | |
| Plenary Speaker | Wednesday • 10 to 10:50 a.m.  
Johnson Auditorium  
Society and Gender  
Winona LaDuke | |
| CD1. Wednesday • 9 to 10:50 a.m. • Wall Boardroom | Influencing the Human Spirit:  
Developing Identity through Study Abroad  
Multidisciplinary  
Melissa Paschuck, Lori Patterson, Darcy Coughlan | |
| CD2. Wednesday • 9 to 10:50 a.m. • Wall 317 | Experiential Learning: Empowering the  
Human Spirit to Take Meaningful Action  
Education & Human Development  
Jamie Class, Debbie Perkins, Lisa Winters, Ali Cohen, Joe Cannon | |
| CD3. Wednesday • 9 to 10:50 p.m. • EHFA 252 | The Third Intifada: Strategic Nonviolence in Palestine/Israel  
Society & Gender  
James Henderson, Suheir Daoud, Uri Rosenheck | |
| D1. Wednesday • 10 to 10:50 a.m. • Wall 318 | The Human Spirit: Our Interdisciplinary Connections  
Multidisciplinary  
Agatha O’Brien-Gayes, Krystle Marie Bellatore, Justin Wilson, Lanessa Salvatore, Nicholas Powell | |
| D2. Wednesday • 10 to 10:50 a.m. • Wall 308 | Lullabells  
Business & the Economy  
David Leibell | |
| D3. Wednesday • 10 to 10:50 a.m. • Wall 322 | Paradoxes: An Agent of Change in the Sciences  
Science & Technology  
James Pleasant | |
| D4. Wednesday • 10 to 10:50 a.m. • Wall 210 | Working Together to Meet the Challenges of our Times: The Risks, Responsibilities and Rewards of Teamwork  
Multidisciplinary  
Kay Keels, Janice Black, Nick Twigg | |
| D5. Wednesday • 10 to 10:50 a.m. • EHFA 246 | Souls on Fire: St. Patrick and St. Francis  
Arts & Humanities  
Elizabeth Timberlake-Newell | |
| D6. Wednesday • 10 to 10:50 a.m. • EHFA 256 | The $1000 Genome & Personalized Medicine  
Society & Gender  
Michael Pierce | |
| D7. Wednesday • 10 to 10:50 a.m. • EHFA 247 | Twenty-First Century Education:  
CCU Mentoring of the Montessori Elementary School Model UN  
Arts & Humanities  
Dominique de Wit, Dekel Cohen, Justin Wright, Dylan Fender | |
| DE1. Wednesday • 10 to 11:50 a.m. • EHFA 152 | Building Community Through the Arts II  
Arts & Humanities  
Eva Kort, Dequan Williams, Stephan Jablonski, Brian “Cat” Taylor, Sixto Ruiz, David Killoren | |
| E1. Wednesday • 11 to 11:50 a.m. • Wall Boardroom | Improving Dietary Practices Through  ‘MyPlate Coastal’  
Education & Human Development  
Fredanna M’Cormack, Michael Dunn, Christina Auth, Kelcie Rotella, Kaity Essel | |
| E2. Wednesday • 11 to 11:50 a.m. • Wall 317 | Uniting Education, Golf and Conservation  
Using the Adaptive Management Approach and the Conservation Easement Assessment Tool (C-EAT): Is Conservation Science & Technology  
Kevin S. Godwin | |
| E3. Wednesday • 11 to 11:50 a.m. • Wall 318 | Crime Scene: Determine a Victim’s Time of Death Using Newton’s Law of Cooling  
Science & Technology  
Philip Paynter, Rajendra Dahal | |
| E4. Wednesday • 11 to 11:50 a.m. • Wall 308 | Improving Community Resilience  
Business & the Economy  
Rasby Marlene Powell, Ottis Murray | |
E5. Wednesday • 11 to 11:50 a.m. • Wall 322
Assessing Perceptions and Attitudes of an Extreme Sports Park in the Myrtle Beach Area
Multidisciplinary
Taylor Richard, Victoria Wilkins, Desiree Fair, Deandra Lipscomb

E6. Wednesday • 11 to 11:50 a.m. • EHFA 247
Love is a Fallacy or How to Make Logic Work for You
Arts & Humanities
Emily M Crookston, Student Presenters (TBD)

E7. Wednesday • 11 to 11:50 a.m. • EHFA 256
Realizing Spirit Through Rhythm
Arts & Humanities
Roger Johansen

E8. Wednesday • 11 to 11:50 a.m. • EHFA 246
I See Southern People: Investigating Cultural Remnants in a Post-Apocalyptic World
Arts & Humanities
Sommersill Tarabek

E9. Wednesday • 11 to 11:50 a.m. • EHFA 252
True Colors: Viewing China’s Trending Emotional State on the Water Cube
Arts & Humanities
Steven Bleicher

Lyricl Lunch
Wednesday • 11:30 a.m. to 1:30 p.m.
Starbucks Café, CiNO Grille and Einstein Bros Bagels
Multidisciplinary
Singers & Songwriters:
Dan Barnhart, Fair, Alex Lawson, Scott Pleasant

F1. Wednesday • Noon to 12:50 p.m. • Wall 223
Purrr, Grrowl, Screech and Buzzz: Animal Metaphors and You
Multidisciplinary
Janice A. Black, Carol M. Megehee

F2. Wednesday • Noon to 12:50 p.m. • Wall 308
Political Ethics
Multidisciplinary
Jonathan Trerise, Emily Crookston, David Killoren

F3. Wednesday • Noon to 12:50 p.m. • Wall 318
JP Is My Hero
Education & Human Development
Michael Latta, Barbara Latta

F4. Wednesday • Noon to 12:50 p.m. • Wall 309
Cinderella: A Tale of Gore and Hope or a Tale of Dreams and Hope?
Multidisciplinary
P. Michael Campbell, Alec Dougherty, Tori Saunders, Jared Werner

F5. Wednesday • Noon to 12:50 p.m. • Wall 317
Assessment of Knowledge Linked Between Risk Factors and Strokes
Science & Technology
Tyrone Davis

F6. Wednesday • Noon to 12:50 p.m. • EHFA 247
The Yellow Ribbon: Is there a Way to Prevent and Decrease the Rate of Suicide?
Society & Gender
Charles Thompson, Malorie Williams, Karah Schakleford

F7. Wednesday • Noon to 12:50 p.m. • EHFA 256
Inclusive Theatre Group
Arts & Humanities
Gwendolyn Schwinke, Brantley Ivey, Megan Seier, Maggie Mayeux

F8. Wednesday • Noon to 12:50 p.m. • EHFA 152
Dating Violence and Sexual Assault
Society & Gender
Robert Jenkot, Matthew Wilkinson, Hephzibah Strmic-Pawl, Malvin Porter, Andrew Terranova

F9. Wednesday • Noon to 12:50 p.m. • EHFA 246
Studying in Other Countries
Arts & Humanities
Yun Sil Jeon, Alejandro Munoz-Garces, Jose Luis Mireles, Mario Morales

FG1. Wednesday • Noon to 1:50 p.m. • Johnson Auditorium
Beauty and the Human Spirit
Multidisciplinary
Sara Sanders, Marian David, Marcie Ellerbe, Carolyn Ellis, Janet Files, Sally Z. Hare, Sandie Merriam, Jim Rogers, Debbie Stanley

G1. Wednesday • 1 to 1:50 p.m. • Wall Boardroom
Theatre of the Oppressed in Action
Multidisciplinary
Amanda Masterpaul

G2. Wednesday • 1 to 1:50 p.m. • Wall 309
Strategic Directions for Conflict Resolution
Multidisciplinary
Charmaine Tomczyk

G3. Wednesday • 1 to 1:50 p.m. • Wall 318
The Jeep Problem
Science & Technology
Samantha Glena
G4. Wednesday • 1 to 1:50 p.m. • Wall 317
Coastal Composition Commons:
A Digital Badge Initiative
Education & Human Development
Denise Paster, Alan Reid

G5. Wednesday • 1 to 1:50 p.m. • Wall 308
South Carolina: The First 100 Years
Business & the Economy
John Navin

G6. Wednesday • 1 to 1:50 p.m. • EHFA 246
LGBTQ Panel Discussion
Society & Gender
CCU Safe Zone Staff, Holly Owens, Miranda Jarchow, Travis Willis, Patrick Kiestler

G7. Wednesday • 1 to 1:50 p.m. • EHFA 256
Realizing Spirit through Rhythm
Arts & Humanities
Roger Johansen

G8. Wednesday • 1 to 1:50 p.m. • EHFA 252
Dress Me Up!
Society & Gender
Sommersill Tarabek

G9. Wednesday • 1 to 1:50 p.m. • EHFA 251
Playing the Past: Immersive Video Games and Landscape Simulations in Exploring Historical Landscapes
Arts & Humanities
Susan Bergeron, Matt MacDonough

GH1. Wednesday • 1 to 2:50 p.m. • EHFA 152
Building Community Through the Arts III
Arts & Humanities
Eva Kort, Faculty; Jeffrey Halverson, Tripithi Pillai, Jon Trerise, Elizabeth Howie

H1. Wednesday • 2 to 2:50 p.m. • Wall 317
Recent U.S. Macroeconomic Policy: Some Thoughts
Business & the Economy
Kenrick Jordan

H2. Wednesday • 2 to 2:50 p.m. • Wall 309
Legacy of a Mentor
Education & Human Development
Malorie Williams, Charles Thompson

H3. Wednesday • 2 to 2:50 p.m. • Wall 318
Voronoi Diagrams
Science & Technology
Ogul Arslan

H4. Wednesday • 2 to 2:50 p.m. • Wall 308
The Human Spirit: Tales from Semesters at Sea
Multidisciplinary
Rob Young, Dan Abel

H5. Wednesday • 2 to 2:50 p.m. • EHFA 247
The Thought That Counts
Society & Gender
Charles Thompson, Malorie Williams, Karah Shakleford

H6. Wednesday • 2 to 2:50 p.m. • EHFA 256
Renewed Humanism in Visual Arts
Arts & Humanities
Carmen Bilton

H7. Wednesday • 2 to 2:50 p.m. • EHFA 252
The Value of Philosophy 101
Arts & Humanities
Emily M. Crookston, Anthony Craig, Samuel Jordan, C.J. Garling, Devin Austin, Tyler Marsh, Michael Donaldson, Trevon Scott, Samantha Turano

H8. Wednesday • 2 to 2:50 p.m. • EHFA 246
Adventure Time and Time
Arts & Humanities
Ron Green, Mary Green

H9. Wednesday • 2 to 2:50 p.m. • EHFA 253
Linguistic Attitudes of Members of the Hispanic Community in Conway, S.C.
Arts & Humanities
Yun Sil Jeon

H11. Wednesday • 2 to 3:50 p.m. • Wall Boardroom
Innovative Instruction and Technology
Multidisciplinary
CeTEAL, Dodi Hodges, Other Presenters (TBD)

I1. Wednesday • 3 to 3:50 p.m. • Wall 318
Consumer Perceptions in a Globalized World
Business & the Economy
Anna Schultz; Verena Hauck

I2. Wednesday • 3 to 3:50 p.m. • Wall 317
Teaching English Abroad: Everything You Need to Know
Education & Human Development
Gerald Roybal III, Brandon Palmer

I3. Wednesday • 3 to 3:50 p.m. • Wall 225
The Bully Movie Assignment
Multidisciplinary
Junior 1 Literacy Class, Elena Andrei, Hannah Lewis, Brittany Battista, April Floyd, Stephanie Monette, Clayton Wynn, Heather Adams, Kaylaarelano, Jennifer Viteritto, Daniel Digeronimo
15. Wednesday • 3 to 3:50 p.m. • Wall 206
   The Human Family – An Experiment in Compassion
   Multidisciplinary
   Ly Pham, Patrick Dorton

16. Wednesday • 3 to 3:50 p.m. • Wall 309
   Reading and the Human Spirit
   Multidisciplinary
   Margaret Fain, Sara Sanders, Allison Faix

17. Wednesday • 3 to 3:50 p.m. • Wall 308
   International Internships: Experience of a Lifetime
   Multidisciplinary
   Robert Bulsza, Nelljean Rice, Darla Domke-Damonte

Plenary Speaker
   Wednesday • 4 to 4:50 p.m.
   Johnson Auditorium
   Arts & Humanities
   Nikki Finney

Songwriters of the Strand Festival
   Wednesday • 7 to 8:30 p.m.
   Wheelwright Auditorium
   Multidisciplinary
   Songwriters & Singers:
   Dan Barnhart, Fair, Alex Lawson, Scott Pleasant

Thursday, April 3

David Bankston & Friends Concert
   Thursday • 7:30 to 9 p.m.
   Wheelwright Auditorium
   Multidisciplinary
Coastal Carolina University
Annual Undergraduate Research Competition

Tuesday, April 1 and Wednesday, April 2
Brittain Hall

• **What:** Each spoken session will include a 10-12 minute presentation by an undergraduate student followed by 5-7 minutes of Q&A. A dedicated poster session will be held on Tuesday from 3:30 to 5 p.m. and Wednesday from 11 a.m. to 12:30 p.m.

• **Where:** All undergraduate research competition sessions will be on the first floor of Brittain Hall.

• **How:** Each session will be judged based on a rubric pre-distributed to all presenters. Judges will be Coastal Carolina University faculty. Award recognition will be announced during the Honors Convocation on Friday, May 9 at 3 p.m.

**Tuesday, April 1**

**Oral Session I – 2 to 3:20 p.m**

**Poster Session I – 3:30 to 5 p.m.**

**Oral Session I**

• 2 to 2:20 p.m. • BTH 101
  **Kayla Smith**
  *Faculty Mentor: Michelle Barthet*
  “Characteristics and Effects of Muscular Dystrophy in Broiler Chickens”

• 2 to 2:20 p.m. • BTH 112
  **Alexander Tavernier**
  *Faculty Mentor: John Schiro*
  “Augmented Reality and the Future of Technology”

• 2 to 2:20 p.m. • BTH 114
  **Nathaniel Grimes**
  *Faculty Mentor: Robert Salvino*
  “Institutions of the Shark Fin Market: Roles of Externalities and Incentives”

• 2:20 to 2:40 p.m. • BTH 101
  **Marek Jendrassak and Wilmont Merchant**
  *Faculty Mentors: Erin Hackett, Var Limpasuvan and Roi Gurka*
  “Particles’ Settling Velocities in Turbulent Conditions”

• 2:20 to 2:40 p.m. • BTH 112
  **Ali Cohen**
  *Faculty Mentor: Laura Villegas Merendez*
  “How the Values, Attitudes and Cultures of Difference Regions are Reflected in the Languages They Speak”

• 2:20 to 2:40 p.m. • BTH 114
  **Richard Taylor, Desiree Fair, Deandra Lipscomb, Victoria Wilkinson**
  *Faculty Mentor: Monica Fine*
  “Assessing Perceptions and Attitudes of an Extreme Sports Park in the Myrtle Beach Area”

• 2:40 to 3 p.m. • BTH 101
  **Sarena Flewelling**
  *Faculty Mentor: Scott Parker*
  “Interactive Effects of Temperature and Oxygen Concentration on Growth and Development of Lizard Embryos”

• 2:40 to 3 p.m. • BTH 112
  **Katelyn Dawsey**
  *Faculty Mentor: Corinne Dalio*
  “Cultivation Theory: Violence in Video Games”

• 2:40 to 3 p.m. • BTH 114
  **Alison McQuarri**
  *Faculty Mentor: Brandi Neal*
  “Salivary Cortisol Levels of Paramedics with Controlled Static Work Schedules”

• 3 to 3:20 p.m. • BTH 101
  **Samson Ahmed**
  *Faculty Mentor: Daniel Williams*
  “KillerRed-Mediated Neurodegeneration in Caenorhabditis elegans”

• 3 to 3:20 p.m. • BTH 112
  **Meghan Laffin**
  *Faculty Mentor: Wes Fondren*
  “What Conspiracy Culture Means to the News”

• 3 to 3:20 p.m. • BTH 114
  **Amanda Bernadyn**
  *Faculty Mentor: Maggie Morehouse*
  “Child Abuse, Moral Reasoning & Criminality”

**Tuesday Poster Session I**

3:30 to 5 p.m. • Brittain Hall – first floor

*See individual listing on Poster Session page*
Wednesday, April 2

Oral Session II – 9 to 11 a.m.
Poster Session II – 11 a.m. to 12:30 p.m.
Oral Session III – 1 to 3 p.m.

Wednesday, Oral Session II

- 9 to 9:20 a.m. • BTH 101
  Christian Barrett
  Faculty Mentor: Valdislav Gulis
  “Extracellular Enzyme Activity of Plant Litter-Associated Microorganisms Depends on Dissolved Inorganic Nutrient Availability”

- 9 to 9:20 a.m. • BTH 112
  Jacob Wade
  Faculty Mentor: Rob Young
  “Sex Determination of Bottlenose Dolphins from Dorsal Fin Photo-Analysis”

- 9 to 9:20 a.m. • BTH 114
  Sadara Shine
  Faculty Mentors: Richard Aidoo
  “The Globalization of Human Rights in Post-genocide Rwanda”

- 9:20 to 9:40 a.m. • BTH 101
  Danielle R. Ravancho
  Faculty Mentor: Michelle Barthet
  “The Discovery of Novel Genes Amplified during Tail Regeneration of Anolis carolinensis”

- 9:20 to 9:40 a.m. • BTH 112
  Taylor LaChance
  Faculty Mentor: Jennifer Sellers
  “Renewable Energy in the United States and What is Best for South Carolina”

- 9:20 to 9:40 a.m. • BTH 114
  Mary Anderson
  Faculty Mentors: Greg Martel and Karen Aguirre
  “Effectiveness of Gaming Systems on Balance in Older Individuals”

- 9:40 to 10 a.m. • BTH 101
  Breanna Willeford, Sierra Willeford, Duncan Perry
  Faculty Mentors: Fang Ju Lin and Tianyi Wu
  “Effect of Grape Seed Extract in Fruit Fly Drosophila Huntington’s Disease Model”

- 9:40 to 10 a.m. • BTH 112
  Ashleigh Simons
  Faculty Mentor: Linda Palm
  “Blame Attribution as a Function of Sexual Assault Victim Characteristics”

- 9:40 to 10 a.m. • BTH 114
  Dominique DeWit
  Faculty Mentor: Pamela Martin and Holly Tankersley
  “Global Stability through a Sustainable Development Approach”

- 10 to 10:20 a.m. • BTH 101
  Michael Sarson
  Faculty Mentor: James Wright
  “Retrospective Review Comparing Crossed-screw and Locking Plate Fixation of Hallux Metatarsophalangeal Joint Arthrodesis”

- 10 to 10:20 a.m. • BTH 112
  Kerry Smith
  Faculty Mentor: Jon Han Kim
  “Underdog Advantage on Creativity”

- 10 to 10:20 a.m. • BTH 114
  Anastasia Rhodes
  Faculty Mentor: Holly Tankersley
  “Russian Democracy and the Civil Society Behind its Flaws”

- 10:20 to 10:40 a.m. • BTH 101
  Kayla Liland
  Faculty Mentor: Sharon Thompson
  “Sports Nutrition Reinforcement”

- 10:20 to 10:40 a.m. • BTH 112
  Melissa Merrill
  Faculty Mentor: John Piroch
  “Social Support and Fear of Negative Evaluation as a Function of Gender”

- 10:20 to 10:40 a.m. • BTH 114
  Tahzeneka Stanley
  Faculty Mentor: K. Holody
  “Experience of Graduating Seniors Correlating with Difficulty of Landing a Job in their Profession”

- 10:40 to 11 a.m. • BTH 101
  Jessica Otten
  Faculty Mentor: Sharon Thompson
  “Help Me Help Your Diabetes”

- 10:40 to 11 a.m. • BTH 112
  Stephen Rodgers
  Faculty Mentor: Terry Pettijohn
  “Embodiment: Dirty Hands versus Dirty Mouths”

- 10:40 to 11 a.m. • BTH 114
  Jenifer Butler
  Faculty Mentor: Tripathi Pillai
  “Renaissance Literature: Deconstructing a Monarchy”

Wednesday, Poster Session II

11 a.m. to 12:30 p.m. • Brittain Hall – first floor
See individual listing on Poster Sessions page
Wednesday, Oral Session III

- 1 to 1:20 p.m. • BTH 101
  Janel Reeves  
  Faculty Mentor: Sharon Thompson  
  “Call a Vegetable a Vegetable: Perceptions and Taste Ratings”

- 1 to 1:20 p.m. • BTH 112
  Anthony Roddrecia  
  Faculty Mentor: Joan Piroch  
  “Power Poses and Self-Esteem”

- 1 to 1:20 p.m. • BTH 114
  Steven Sargent  
  Faculty Mentor: Maggi Morehouse  
  “Digital Archiving of Black WWII Soldiers”

- 1:20 to 1:40 p.m. • BTH 101
  Dori Sanders  
  Faculty Mentor: Sharon Thompson  
  “Biking in Kind Environments: Study of Attitudes and Knowledge of Bicycle Safety”

- 1:20 to 1:40 p.m. • BTH 112
  Anthony Germany  
  Faculty Mentor: Joan Piroch  
  “Optimism and Constitutional Knowledge in a Sample of College Students”

- 1:20 to 1:40 p.m. • BTH 114
  Mark Jessup  
  Faculty Mentor: John Navin  
  “Artless and Uncultivates as the Soil which Fosters Them”

- 1:40 to 2 p.m. • BTH 101
  Ina Troutman  
  Faculty Mentor: Sharon Thompson  
  “Survey Interpretation and Data Analysis of Coastal Cycles”

- 1:40 to 2 p.m. • BTH 112
  Ryan King  
  Faculty Mentor: Terry Pettijohn  
  “Personality Perception in Nonverbal Communication”

- 1:40 to 2 p.m. • BTH 114
  Madelyn Johnson  
  Faculty Mentor: Aneiyla Barnes  
  “Women of Augustan Rome”

- 2 to 2:20 p.m. • BTH 101
  Kaitlyn Essel  
  Faculty Mentors: Fredanna M’Cormack and Sharon Thompson  
  “Development, Implementation and Evaluation of a Pilot Dietary Intake Tool Appropriate for a University Campus Population”

- 2 to 2:20 p.m. • BTH 112
  Alysha McGrath  
  Faculty Mentor: Joan Piroch  
  “A Study of Pet Bonding, Interpersonal Trust, and Helping Attitudes as a Function of Gender and Pet Ownership”

- 2 to 2:20 p.m. • BTH 114
  Nicole Johnson  
  Faculty Mentor: Suheir Daoud  
  “Lost Generation: Syrian Child Refugees”

- 2:20 to 2:40 p.m. • BTH 114
  M. Grace Cox  
  Faculty Mentor: Amanda Brian  
  “Walt Disney World: A Rite of Passage”
Tuesday Poster Session I
3:30 to 5 p.m.
Brittain Hall, room 108 and 109

- LAYLA BAKAL and SAMUEL MCGEE
  Synthesis of Flinderole C Analogues (#1)
  Faculty Mentor: Bryan Wakefield

- JESSICA BRUCE, RACHEL GOFF and
  MICHELEA POLLY
  Intensity and Prevalence of Trematode
  Metacercariae in Donax variabilis in
  South Carolina at Waites Island, Myrtle Beach
  State Park and Huntington Beach State Park (#19)
  Faculty Mentor: Erin Burge

- KELLY CHAPLIN
  A New Approach to the Synthesis of FlinderoleC (#3)
  Faculty Mentor: Bryan Wakefield

- COURTNEY DUNN
  Residence Patterns of Inshore Bottlenose Dolphin
  (Tursiops truncatus) from Little River, SC to
  North Inlet, SC (#17)
  Faculty Mentor: Rob Young

- RICHARD FLOYD
  Growth of Metal Nanostructures via
  Physical Vapor Deposition (#27)
  Faculty Mentor: Chris Moore

- NATHANIE GRIMES
  Assessment of Evaporation duct Models as a
  Source of Uncertainty in Radar Wave
  Propagation Simulations (#23)
  Faculty Mentor: Erin Hackett

- JOSEPH GRISWOLD, CHARLES KLINNGER and
  COLEEN HALEY
  Prevalence and Intensity of Ectoparasites on
  Fundulus heteroclitus as a Function of Size in
  Two Marsh Systems in South Carolina, USA (#21)
  Faculty Mentor: Erin Burge

- WILMONT MERCHANT and MAREK JEMDRASSAK
  Impact of Particles’ Attributes on Settling
  Velocities in Sediment Transport (#29)
  Faculty Mentors: Var Limpasuvan, Roi Gurka and
  Erin Hackett

- WYLEE MCGREEVY
  Environmental Accounting: Catching Companies
  who refuse to go Green Red-Handed (#13)
  Faculty Mentor: Sheila Mitchell

Wednesday Poster Session II
11:30 a.m. to 12:30 p.m.
Brittain Hall, room 108 and 109

- TYLER ASHLAND
  Determination of Rate of Reaction for the
  Hydrolysis of Phthalates with Various Bases (#2)
  Faculty Mentor: Kevin McWilliams

- MALLORY BANTON
  The Geometric Breakdown of the Zn2+ Chelating
  Pocket within the ZN-1 Domain of E. coli
  Leucyl-tRNA Synthetase Contribute to its
  Catalytic Cycle (#4)
  Faculty Mentor: Rachel Whitaker

- LAYLA BAYKAL
  Bacterial Toxicity Results from Mutations Made
  in the Translocation Peptide of Leucyl-tRNA
  Synthetase (#6)
  Faculty Mentor: Rachel Whitaker

- ANTHONY CARRONE
  Tattoos and Risk Taking Behavior
  in College Students (#16)
  Faculty Mentor: Miranda Brenneman

- MACY CUNNINGHAM and DELANIE SAGE
  Continuous Ground and Lake Water Level
  Monitoring in Briarcliffe Acres, SC (#18)
  Faculty Mentors: Susan Libes, Rick Peterson,
  Nancy Edelman and Tom Garigen

- MELITON MUÑOZ
  An Evaluation of SNAP Nutrition Education
  Content in a South Carolina Community (#15)
  Faculty Mentor: Fredanna M’Cormack

- DEREK PRIDE and RIANE PETERSMAN
  The Quest for a Bacteriophage Lytic to
  Staphylococcus aureus and Escherichia coli (#5)
  Faculty Mentor: Paul Richardson

- JOHN SEGRETO and CHRISTINE MARTINETT
  New Applications of a Bronsted Acid Catalyzed
  Friedel-Crafts Reaction (#7)
  Faculty Mentor: Bryan Wakefield

- NICHOLAS THURN and CAITLYN BAKER
  Development of a DNA Fingerprinting Protocol
  for Differentiation between Bacteriophages in
  Aquatic Environments (#9)
  Faculty Mentor: Paul Richardson

- JORDAN WESEL and INA TROUTMAN
  D-amino Acid Inhibitory Properties on
  Staphylococcus aureus and Escherchia coli
  Growth (#11)
  Faculty Mentor: Paul Richardson
• ALEKSANDAR DIMKOVIKJ
  Comparison of Common Non-Point Source
  Fecal Pollution to Recreational Waters: Regulatory
  Fecal Indicator Bacteria vs. Host Specific Genetic
  qPCR markers in Avian and Canine Fecal Matter
  (#20)
  Faculty Mentor: J. Michael Trapp

• CAMERON HANCE
  Synthesis in Osmium-olefin Compounds (#8)
  Faculty Mentor: Kevin McWilliams

• VALERIE HARTIGAN
  Stable Isotope Analysis in Deep Sea
  Cephalopods of the Bear Seamount (#22)
  Faculty Mentor: Julianna Harding

• AMY JOHNSON
  Creating a Pocket-sized Biosensor for the
  Detection of Heavy Metals in Drinking Water
  (#10)
  Faculty Mentor: Rachel Whitaker

• EMILY MARCHINI
  Prey Capture in Response to Removing Cilia
  from Venus Flytraps (#24)
  Faculty Mentor: John Hutchens

• AMBER MARTIN
  Functional Response of Venus Flytraps
  (Dionaea muscipula) (#26)
  Faculty Mentor: John Hutchens

• VALORIA RITTER
  Biomaterial Development for the Removal
  of Metal Contaminants in Water (#12)
  Faculty Mentor: Rachel Whitaker

• CODY SMITH
  Bioremediation of Aquatic Ecosystems
  using Engineered Laccase for the Degradation
  of Ethinylestradiol and Bisphenol-A (#14)
  Faculty Mentor: Rachel Whitaker

• ROMI TRABOLSKY
  Investigating Maturase Evolution (#28)
  Faculty Mentor: Michelle Barthet
**ABSTRACTS**

2014 Undergraduate Research Competition

*(Alphabetical by Presenter)*

- **KillerRed-Mediated Neurodegeneration in Caenorhabditis elegans** *(Oral Presentation)*
  Samson Ahmed – Biology Major, Pre-Med
  Faculty Research Mentor: Daniel Williams

The origin of neurological diseases is an incompletely understood area of medicine, which makes treatment and prevention difficult. To fully comprehend their complex roots, I will focus on disease progression at the cellular level of Caenorhabditis elegans by using a tool called KillerRed. Through a sequence of controlled experiments, I have discovered that illumination of KillerRed expressing worms disrupts the structural and functional integrity of neurons. This should greatly interest the scientific and medical communities.

- **Effectiveness of Gaming Systems on Balance in Older Individuals** *(Oral Presentation)*
  Mary E. Anderson – Biology Major
  Faculty Research Mentors: Greg Martel and Karen Aguirre

Balance training using gaming systems, called exergaming, is a rising trend for reducing fall risk in older individuals. Previous studies have conducted research pertaining to gaming systems and traditional balance training; however, there is a lack of comparison between gaming systems. This study was performed to determine the effectiveness of two gaming systems, the Wii Fit and Xbox Kinect, as compared to traditional balance training. This study was performed with subjects (N=5) over the age of 65, in good health, randomly placed in one of the three balance training groups: Wii Fit (n=2), Xbox Kinect (n=2), and Traditional balance training (n=1). Tests for balance were conducted before a six-week control period, after the control period and after a six-week intervention period. The study showed decreased fall risk in subjects who performed exergaming balance training as compared to the individual who performed traditional balance training.

- **Determination of Rate of Reaction for the Hydrolysis of Phthalates with Various Bases** *(Poster Presentation)*
  Tyler H. Ashlund – Chemistry Major
  Faculty Research Mentor: Kevin McWilliams

Phthalates mostly come from plasticisers for improving the flexibility of polymeric materials. When these materials degrade, these phthalates have been known to accumulate in the environment; therefore it is useful to know about various side reactions occurring with the pollutants within the environment. Through experimentation, I determined the Rate Law for the Hydrolysis of such Phthalates by use of three-hour reaction times and quantification through Gas Chromatography-Mass Spectrometer.

- **The Geometric Breakdown of the Zn2+ Chelating Pocket within the ZN-1 Domain of E. coli Leucyl-tRNA Synthetase Contributes to its Catalytic Cycle** *(Poster Presentation)*
  Mallory J. Banton – Biology Major
  Faculty Research Mentor: Rachel Whitaker

The E. coli leucyl-tRNA synthetase (LeuRS) enzyme is part of a larger family of enzymes known as aminoacyl-tRNA synthetases (aaRS). For many of these aaRSs, a zinc binding domain(s) plays a central role in the process of aminoacylation. Chelation of Zn2+ within the zinc binding domain (ZN-1) changes the domain’s geometric configuration. The rigid geometric shape of the zinc-binding pocket appears to breakdown as the ZN-1 domain transitions between the aminoacylation and editing conformations.

- **Extracellular Enzyme Activity of Plant Litter-Associated Microorganisms Depends on Dissolved Inorganic Nutrient Availability** *(Oral Presentation)*
  Christian Barrett – Biology Major
  Faculty Research Mentor: Vladislav Gulis

Litter-associated microbial decomposers, which are important intermediaries of carbon and energy flow in streams, obtain nitrogen and phosphorus from the substrate and water column. We measured the activity of phosphatase, chitinase, leucine aminopeptidase and beta-glucosidase associated with decomposing litter differing in carbon quality and N and P content (maple and rhododendron leaf litter, wood veneers) in streamside channels with manipulated concentrations of N, P, and N:P ratios. We found statistically significant effects of dissolved nutrients.

- **Bacterial Toxicity Results from Mutations Made in the Translocation Peptide of Leucyl-tRNA Synthetase** *(Poster Presentation)*
  Layla N. Baykal – Biology Major
  Faculty Research Mentor: Rachel Whitaker

Leucyl-tRNA synthetase (LeuRS) is among the aminoacyl-tRNA synthetases (aaRSs) family that ensures translation through providing aminoacylated tRNA products that become incorporated by the ribosome. LeuRS has two domains, the aminoacylation and the CPI editing domains. We believe that we have generated mutations within LeuRS that alter the translocation event of tRNA, which lead to bacterial toxicity in Escherichia coli (E. coli). Misaminoacylation and reduced rates of aminoacylation and hydrolysis are attributed to this intracellular toxicity.

- **Synthesis of Flinderole C Analogues** *(Poster Presentation)*
  Layla N. Baykal – Biology Major
  and Samuel T. McGee
  Faculty Research Mentor: Bryan Wakefield

Natural products, which are produced by plants, animals and microorganisms, often serve as the starting point for the development of new drugs for the treatment of human disease. Flinderole C is a naturally occurring compound that has shown activity against the DD2 strain of malaria, which is chloroquine resistant. Simplified analogues of this compound are currently being constructed. It is envisioned that they will maintain the desired activity while making the synthesis more straightforward.
Child Abuse, Moral Reasoning & Criminality
(Oral Presentation)
Amanda Bernadyn – Sociology Major
Faculty Research Mentor: Maggi Morehouse

Child abuse is a major social problem in today's society. Delinquency and criminality are only two of the possible consequences of child abuse (Agnew, et.al 2012, Hancock 1982, Olson 2013, Widom 1996). Although, not every case of abuse will lead to criminal activity (Peltzer 1995, Samenow 2011) there are many cases that do. This paper analyzes cognitive development theory and specifically moral reasoning by looking at case studies of child abuse (Flowe 1996: 1).

Intensity and Prevalence of Trematode Metacercariae in Donax variabilis in South Carolina at Waties Island, Myrtle Beach State Park, and Huntington Beach State Park (Poster Presentation)
Jessica L. Bruce – Marine Science Major
Rachel C. Goff and Micheala R. Polly
Faculty Research Mentor: Erin J. Burge

Coquina clams, Donax variabilis (n = 3,450) were examined to determine the intensities of trematode metacercariae, a transmissive resting stage within the parasite life cycle. D. variabilis (2 – 22 mm) were collected from four beach heights during February, March and April 2013 at Waties Island, Huntington Beach State Park and Myrtle Beach State Park, South Carolina. Intensity and prevalence of metacercariae significantly increased with shell length. Clams > 12 mm had 100 percent prevalence.

Renaissance Literature: Deconstructing a Monarchy (Oral Presentation)
Jenifer Butler – English Major
Faculty Research Mentor: Tripthi Pillai

My research combines historiography, literary analysis and critical theory to study the impact of Queen Elizabeth I (lifespan: 1533-1603; England’s monarch: 1558-1603) on Renaissance literature. I trace particular components of the literature – characterization, plot and theme – and analyze how these narrative contemporary history. Specifically, I demonstrate through a study of plays by Shakespeare and his contemporaries those effects of gender deconstruction that were mobilized by Elizabeth I and were popularized within the Renaissance literary imagination.

Tattoos and Risk-Taking Behavior in College Students (Poster Presentation)
Anthony Carrone – Psychology Major
Faculty Research Mentor: Miranda Brenneman

Researchers in this study examined college students with and without tattoos to determine whether there is a difference in risk-taking behavior between groups. A total of 140 participants completed a series of surveys and computer tests measuring risky behavior. Although some differences were found, the presence of a tattoo on an individual does not indicate involvement in risk-taking behavior.

A New Approach to the Synthesis of Flinderole C (Poster Presentation)
Kelly M. Chaplin – Biology Major
Faculty Research Mentor: Bryan Wakefield

Flinderole C is an alkaloid that shows antimalarial activity against the chloroquine resistant DD2 strain of malaria. Our group has attempted to synthesize the core of the molecule without success. Recently, we adopted a new approach to the molecule that using a Mannich-type reaction to install the required allylic alcohol instead of a cross-metathesis. This change should allow for the synthesis of the flinderole core so new compounds can be constructed for biological testing.

How the Values, Attitudes and Cultures of Different Regions Are R (Oral Presentation)
Ali Cohen – Special Education Major
Faculty Research Mentor: Laura Villegas Meredez

The rules of syntax vary by language and, to some extent, even dialects within that language. Though it often goes unnoticed, the ways languages are constructed reflect the values, attitudes and cultures of the countries and/or regions in which they are spoken. This research examines the relationship between varying languages and the cultures they reflect. Additionally, it also examines to what extent contrasting languages contribute to tangible outcomes such as brain development, economic preparedness, etc.

Walt Disney World: A Rite of Passage (Oral Presentation)
Grace Cox – History Major
Faculty Research Mentor: Amanda Brian

This oral presentation illustrates how the theme park Walt Disney World came to be seen as a rite of passage and a fundamental aspect of raising the American child. The goal is to show this phenomenon through examining the importance of memorable characters as well as the history of the family vacation. Such conclusions are achieved through research on leisure and the family, and the successful marketing of WDW as the “happiest place on earth.”

Continuous Ground and Lake Water Level Monitoring in Briarcliffe Acres, S.C. (Post er Presentation)
Macy Cunningham – Marine Science Major
Delanie Sage
Faculty Research Mentors: Susan Libes, Rick Peterson, Nancy Edelman, Tom Garigen

Continuous measurements of water level are being made in three groundwater wells and two lakes in the town of Briarcliffe Acres, SC to inform better management of water during times of drought and to investigate potential interactions with septic tanks during times of high water level. Monitoring began in May 2012 and since that time water levels have risen in all the wells due to abundant rainfall. Daily oscillations in water levels have been observed in some wells and are attributed to evapotranspiration.

Cultivation Theory: Violence in Video Games (Oral Presentation)
Katelyn Dawsey – Communication Major
Faculty Research Mentor: Corinne Dalelio

Various studies have been performed on violence and aggression shown in the media and if it can have an effect on its viewers, but not many have studied the effect of video games. Video games have become more graphic, realistic and violent than ever before. Through qualitative research methods such as participant observation, interviews and focus groups we can better determine if exposure has an effect on the gamer’s aggressive or violent behaviors or thoughts.
• Comparison of Common Non-Point Source Fecal Pollution to Recreational Waters: Fecal Indicator Bacteria vs. Host Specific Genetic qPCR markers in Avian and Canine Fecal Matter (Poster Presentation)
  Aleksandar Dimkovikj – Marine Science and Biochemistry Major
  Faculty Research Mentor: J. Michael Trapp
Water quality impairments are commonly associated with elevated concentrations of fecal indicator bacteria (FIB). Substrate-based bacterial culturing methods and molecular techniques are used when quantifying FIB and determining water quality impairments. We compared regulatory FIB (E. coli) to host-specific qPCR assays on direct fecal grab samples. Results suggest that inter-specimen variability makes interpretation of qPCR results difficult, while the time series study indicates that the ratio of FIB to genetic marker changes over time.

• Global Stability through a Sustainable Development Approach (Oral Presentation)
  Dominique deWit – Political Science Major
  Faculty Research Mentor: Pamela Martin
In recent years, the global economic system has been marked by the economic crisis of 2008-2009, widening inequality, environmental issues and climate change. This paper provides critiques to the capitalist system by assessing recent market failures and the roles international development institutions have played to bring about sustainable development. The challenges facing neoliberalism have grown over time, and simultaneously alternative ideas and models have developed that potentially provide a more holistic approach to development, human well being, socio-economic equality and environmental sustainability. Ideas vary from viewing the economic system as a part of a finite ecosystem, altering humanity’s living standards to one more in harmony with nature and respecting the planet’s biophysical limits. Long-term sustainability will require a step away from economic growth models, a global transition to restrain use of energy and materials, and embracing the welfare and happiness of populations to measure societal progress.

• Residence Patterns of Inshore Bottlenose Dolphin (Tursiops truncatus) from Little River, SC to North Inlet, SC (Poster Presentation)
  Courtney Dunn – Marine Science Major
  Faculty Research Mentor: Rob Young
The current lack of understanding regarding population structures of the east coast bottlenose dolphins (Tursiops truncatus) makes planning or implementation of conservation plans difficult, or impossible. Seasonality of sightings and movement of bottlenose dolphin were examined by comparing photo-identification efforts from a dolphin watch group in Little River to research-based photo-identification efforts in Myrtle Beach. Understanding the local stocks can contribute to understanding stock structure along the east coast of the United States.

• Development, Implementation and Evaluation of a Pilot Dietary Intake Tool Appropriate for a University Campus Population (Oral Presentation)
  Kaitlyn May Essel – Health Promotion Major
  Faculty Research Mentors: Fredanna A.D. M’Cormack, Sharon Thompson
Health intervention programs, such as MyPlate on Campus, exist but lack evaluation. Data collection tools can gather health behavior information. A valid, reliable instrument can help evaluate specific population needs to tailor nutritional programming. A survey instrument was developed based on existing peer-reviewed instruments for a midsized college campus population and included a food frequency questionnaire and brief survey to collect qualitative information about the instrument. Results of pilot study and survey will be discussed.

• Interactive Effects of Temperature and Oxygen Concentration on Growth and Development of Lizard Embryos (Oral Presentation)
  Sarena Flewelling – Biology Major
  Faculty Research Mentor: Scott Parker
The aim of this study is to provide a test of predicted consequences of increasing air temperatures on developmental physiology of lizard embryos. We incubated eggs of the South Carolina ground skink (Scincella lateralis) at warm (33 °C) and cool (22 °C) temperatures at oxygen concentrations ranging from hypoxic (9 and 15 percent oxygen) to normoxic (21 percent oxygen). These results suggest that in reptiles, the embryonic developmental period may be especially vulnerable to the effects of prolonged periods of high temperature predicted to occur with global warming.

• Growth of Metal Nanostructures via Physical Vapor Deposition (Poster Presentation)
  Richard D. Floyd Jr. – Applied Physics Major
  Faculty Research Mentor: Chris Moore
We have used a low-cost single zone tube furnace to fabricate metal nanostructures on silicon substrates. Specifically, we evaporate copper, zinc and gold and control furnace properties such as temperature, carrier gas pressure and composition, and the distance from the evaporant to the substrate to enhance nanowire growth. This project should lead to the creation of a new, advanced laboratory activity for physics majors.

• Optimism and Constitutional Knowledge in a Sample of College Students (Oral Presentation)
  Anthony M. Germany – Psychology Major
  Faculty Research Mentor: Joan Piroch
Optimism has been studied in relation to many variables such as suicide, perceptions of life, personality variables, etc. Research supports a relationship between optimism and knowledge; however, the nature of that relationship is unclear. This study was designed to assess college students’ knowledge of the amendments of the Constitution related to scores on an optimism inventory. An understanding of these rights may promote optimism. Non-significant results were discussed related to poor knowledge scores.

• Assessment of Evaporation Duct Models as a Source of Uncertainty in Radar Wave Propagation Simulations (Poster Presentation)
  Nathaniel G. Grimes – Marine Science and Economics Major
  Faculty Research Mentor: Erin Hackett
Radar system performance varies depending on environmental conditions. Ducting is a unique atmospheric phenomenon that results in significant changes to a system’s performance; thus, models are needed to simulate these conditions. Using inverse-problem techniques, this study evaluates currently
implemented duct models compared to measured atmospheric environments as well as the impact of their inaccuracy on simulated radar wave propagation. Improvement of duct models will lead to more accurate assessments of radar system performance.

- **Institutions of the Shark Fin Market: Roles of Externalities and Incentives** *(Oral Presentation)*
  Nathaniel G. Grimes – Marine Science and Economics Major  
  *Faculty Research Mentor:* Robert Salvino

This study analyzes the role institutions have in shaping incentives within the shark fin market. It combines literature findings from multifarious fields of fisheries economics, shark biology and institutional economics to provide an argument that institutions, both formal and informal, were fundamental in establishing the market, guiding how it operates currently and are needed to find ways to correct for negative externalities engendered by sharks’ functions in ecosystems. Possible courses of action are discussed.

- **Prevalence and Intensity of Ectoparasites on Fundulus heteroclitus as a Function of Size in Two Marsh Systems in South Carolina, USA** *(Poster Presentation)*
  Joseph Griswold – Marine Science Major and Charles Klingler, Colleen Haley  
  *Faculty Research Mentor:* Erin Burge

One hundred and forty-nine mummichogs, Fundulus heteroclitus, were examined for gill and skin parasites from two different sampling locations in South Carolina, Waties Island and Murrells Inlet. Mummichogs are a food source for various predators and appear to be an important component in energy flow within estuaries. There were significant differences in total skin parasite intensities, Trichodina sp. intensities and unidentified protozoan parasite intensities between sampling sites.

- **Synthesis of Osmium-olefin Compounds** *(Poster Presentation)*
  Cameron B. Hance – Chemistry and Marine Science Major  
  *Faculty Research Mentor:* Kevin M. McWilliams

Abstract: Group 8 organometallic compounds involving olefins have been studied extensively due to the activation of the olefin upon binding to the metal core. The reactivity of these compounds is known for the iron species, but less so for ruthenium and osmium. This project is directed toward synthesizing a couple new olefin-containing compounds wherein osmium is the metal core in order to investigate the reactivity of the olefin to simple external nucleophiles, such as phosphines or amines.

- **Stable Isotope Analysis in Deep Sea Cephalopods of the Bear Seamount** *(Poster Presentation)*
  Valerie J. Hartigan – Marine Science and Biology Major  
  *Primary Mentor:* Mike Vecchione, NOAA/NMFS  
  National Systematics Lab, Smithsonian National Museum of Natural History  
  *Faculty Research Mentor:* Juliana Harding

The analysis of carbon and nitrogen stable isotopes can be used to reconstruct the food web of nearly any habitat. Using beaks extracted from deep-sea cephalopods, I performed stable isotope analyses to show that interspecific variation in trophic position exists between different cephalopod species of the Bear Seamount deep-sea community. Intraspecific dietary shifts with growth were also illustrated and a new method established for stable isotope analysis of beaks from juvenile and subadult individuals.

- **Impact of Particles’ Physical Attributes on Settling Velocities in Sediment Transport** *(Oral Presentation)*
  Marek Jendrassak – Physics-PreEngineering Major and Wilmont Merchant  
  *Faculty Research Mentors:* Erin Hackett, Varavut Limpasuvan and Roi Gurka

Sediment transport is a process in which fluid movement entrains solid particles, thereby moving them. In the deposition stage of sediment transport, particles reach a terminal or settling velocity, which is simulated experimentally by placing particles of various size and density into a water-filled tank. Recorded with a high-speed camera, images of the particles’ descent are analyzed to compute the particles’ settling velocities. Results reveal the sensitivity of settling velocities to particles’ physical attributes.

- **Particles’ Settling Velocities in Turbulent Conditions** *(Poster Presentation)*
  Marek Jendrassak – Physics-PreEngineering Major and Wilmont Merchant  
  *Faculty Research Mentors:* Erin Hackett, Varavut Limpasuvan and Roi Gurka

Sediment transport, which is responsible for changing coastal shorelines, involves the deposition or settling of particles, and is influenced by turbulence. This study creates turbulence utilizing an oscillating grid tank facility. Particle trajectories in the water are measured using high-speed imaging techniques to obtain their material acceleration with Lagrangian methods. Results shed light on the interactions between particles and fluid, which improves our understanding of the micro-scale physics involved in sediment transport.

- **Artless and Uncultivated As The Soil Which Fosters Them** *(Oral Presentation)*
  Mark Jessup – History Major  
  *Faculty Research Mentor:* John Navin

Early European colonies in North America often relied upon assistance from Native American neighbors. Conflicts between the two were common, but historians still debate the exact causes of the Yamasee War of 1715-1717 in South Carolina. Through analyzing early colonial correspondences, laws and court testimony, it becomes clear that the Yamasee attacked in response to abuse by traders, enslavement of their people, ethnocentrism and encroachment of their land.

- **Creating a Pocket-Sized Biosensor for the Detection of Heavy Metals in Drinking Water** *(Poster Presentation)*
  Amy Johnson – Marine Science Major  
  *Faculty Research Mentor:* Rachel Whitaker

Heavy metal contamination of drinking water is becoming a problem. Exposure in high concentration can lead to neurodegeneration and eventually death. The current method of testing metal contamination in drinking water requires a specially trained technician and expensive equipment. We propose developing an effective and easy to use biodegradable biosensor to test water. It would be made from RNA molecules with the ability to bind to metal ions while tethered to a nanoparticle bead.
- **Women of Augustan Rome** *(Oral Presentation)*  
  Madelyn G. Johnson – History Major  
  *Faculty Research Mentor: Aneilya K. Barnes*

Women of the early Roman Empire are notoriously difficult to extract from the extant sources, but the growing field of gender studies leads modern scholars to seek a deeper understanding of these women. I maintain that women, especially of high status, were seen as a necessary threat to the male-dominated social and political order of Augustan Rome; their power was recognized but remained controlled and suppressed for the sake of honor, public image and tradition.

- **Lost Generation: Syrian Child Refugees** *(Oral Presentation)*  
  Nicola D. Johnson – History Major  
  *Faculty Research Mentor: Suheir Daoud*

The Syrian Crisis has left Syrian children as the “lost generation” because they have limited education available to them in the neighboring countries of Lebanon and Jordan. The Syrian Crisis, also known as the Syrian Conflict, began in March of 2011 between the government and the opposing groups. Overcrowding of schools and no transportation to distant refugee camps in Lebanon and Jordan limits education to reach Syrian child refugees.

- **Personality Perception in Nonverbal Communication** *(Oral Presentation)*  
  Ryan King – Psychology Major  
  *Faculty Research Mentor: Terry F. Pettijohn II*

The manner in which you form a first impression with employment opportunities, classmates, teachers, voters and judges gives a societal perception of you. The perceived personality traits of an individual based on a handshake, no handshake or the placement of an obstruction to the handshake gesture will be experimentally investigated. A person’s personality can be accurately determined by the offering or non-offering of a handshake. An obstructed handshake will be least accurately perceived. An estimated sample size of 50 participants will be included in the study. The importance in determining accuracy in perception of one another’s nonverbal communication may benefit with therapy sessions, student-teacher relationships, inter-personal communication and give insight into our own non-verbal behavior.

- **Renewable Energy in the United States and What is Best for South Carolina** *(Oral Presentation)*  
  Taylor LaChance – Marine Science Major  
  *Faculty Research Mentor: Jennifer Sellers*

We use energy every day, most of which is produced using fossil fuels. Fossil fuels produce many pollutants that can be dangerous for our health and our planet. With an extensive literature review I have looked at the most popular types of renewable energy (wind, solar, geothermal and biofuels) and determined what type of renewable energy would work best along the East Coast and specifically South Carolina.

- **What Conspiracy Culture Means to the News** *(Oral Presentation)*  
  Meghan Laffin – Business Management Major  
  *Faculty Research Mentor: Wes E. Fondren*

“In a world where everyone is a publisher, no one is an editor.” Content is flooding the web and media is changing, gathering information used to be hard, and the news was believable. Now, accessing information is easy, but credibility is questionable. Traditional news sources are fighting for their roles as gatekeepers and my research, through a series of surveys, investigates the format in which they can find success.

- **Sports Nutrition Reinforcement** *(Oral Presentation)*  
  Kayla Liland – Biochemistry Major  
  *Faculty Research Mentor: Sharon Thompson*

Nutrition is critical for academic and sports performance, and studies have shown the dietary habits of athletes are subpar. This study examined the nutritional knowledge, behaviors and beliefs of collegiate athletes upon completion of a six-week, nutritional education program, which was planned and implemented by an undergraduate student. Sessions included nutritional practice education, open discussion, voluntary diet analysis and take-home reference materials. A survey was administered to obtain nutritional knowledge, beliefs and practices as well as demographic data. Survey results will be discussed. This program provides a model others may adopt to educate and positively reinforce collegiate athletes.

- **Prey Capture in Response to Removing cilia from Venus Flytraps** *(Poster Presentation)*  
  Emily Marchini – Biology Major  
  *Faculty Research Mentor: John J. Hutchens*

Cilia on Venus flytraps have been thought to act as a filter by keeping large prey items trapped inside as well as increasing prey capture success. I hypothesized that removal of cilia would not significantly impact length of prey captured or prey capture rate because the plant would miss feeding opportunities if it selectively chose prey based on body length after the trap already closed. Body length of prey captured and prey capture rates were not significantly different between flytraps with and without cilia in the field. This study helps understand the function of cilia on the Venus flytrap.

- **Functional Response of Venus Flytraps** *(Dionaea muscipula)* *(Poster Presentation)*  
  Amber D. Martin – Biology Major  
  *Faculty Research Mentor: John J. Hutchens*

This study explored Venus flytrap prey capture through their functional response, the consumption rate of an organism relative to food availability. The functional response was determined in the laboratory by feeding 0-6 ants to individual flytraps and comparing the number of ants captured with the number of ants provided. Venus flytraps showed a type II functional response, suggesting that flytraps do not capture all ants provided to them, which differs from previous findings.

- **A Study of Pet Bonding, Interpersonal Trust, and Helping Attitudes as a Function of Gender and Pet Ownership** *(Oral Presentation)*  
  Alysha McGrath – Psychology Major  
  *Faculty Research Mentor: Joan Piroch*

Studies have revealed that pet owners have better overall physical health than non-owners. Little research has been conducted to examine the influence of pet ownership on an individual’s psychological health. Pet owners and non-owners were compared in this study to examine interpersonal trust and helping attitudes. T tests did not reveal predicted differences between owners and non-owners; however, some gender differences were obtained. Results were discussed in terms of the benefits of pet ownership.
Salivary Cortisol Levels of Paramedics with Controlled Static Work Schedules  (Oral Presentation)
Alison N. McQuarrie – Interdisciplinary Studies Major
Faculty Research Mentor: Brandi Neal

Emergency calls requiring the services of a paramedic range in scope and severity, and the associated stress leads many to early burnout, depression, substance abuse and suicide. These outcomes are also symptoms of chronically high cortisol levels, the stress hormone. In comparing the cortisol levels of fulltime paramedics working 24-on/48-off shifts to those who work 24-on/72-off shifts, a life-saving correlation could be established.

Environmental Accounting: Catching companies who refuse to go green red-handed  (Poster Presentation)
Wylee McGree – Accounting Major
Faculty Research Mentor: Sheila Mitchell

Environmental Accounting is a branch of accounting that is progressively gaining popularity and has the potential to redefine the standards of sustainability for companies. With integration of past proposals for a carbon tax and a cap and trade system, a new proposal could be formed that will be revolutionary for sustainability standards that could make an actual difference in the world.

Impact of Particles’ Physical Attributes on Settling Velocities in Sediment Transport  (Poster Presentation)
Wilmont Mechant – Applied Physics Major
and Marek Jendrassak
Faculty Research Mentors: Var Limpasuvan, Roi Gurka and Erin Hackett

Sediment transport is a process in which fluid movement entrains solid particles, thereby moving them. In the deposition stage of sediment transport, particles reach a terminal or settling velocity, which is simulated experimentally by placing particles of various size and density into a water-filled tank. Recorded with a high-speed camera, images of the particles’ descent are analyzed to compute the particles’ settling velocities. Results reveal the sensitivity of settling velocities to particles’ physical attributes.

Social Support and Fear of Negative Evaluation as a Function of Gender  (Oral Presentation)
Melissa Merrill – Psychology Major
Faculty Research Mentor: Joan Piroch

This study was designed to examine perceived social support and fear of negative evaluation in men and women. Subjects were 147 Coastal Carolina University students who completed three inventories. Three hypotheses were proposed: women would report more fear of negative evaluation than men; men would have higher perceived social support scores than women; and fear of negative evaluation and perceived social support would be negatively correlated. Statistical results supported only the third hypothesis.

An Evaluation of SNAP Nutrition Education Content in a South Carolina Community  (Poster Presentation)
Meliton Munzo Jr. – Health Care Administration Major
Faculty Research Mentor: Fredanna A.D. M’Cormack

The Supplemental Nutrition Assistance Program (SNAP) makes food available to low income individuals. SNAP provides nutrition education to beneficiaries of the program; however, studies show that SNAP beneficiaries often purchase non-nutritious foods. This study examines the type and quality of nutrition education provided to SNAP beneficiaries. An evaluation of the content, distribution and usability of SNAP material will be conducted. SNAP materials will be reviewed and employees will be interviewed regarding the distribution of SNAP materials.

Help Me Help Your Diabetes  (Oral Presentation)
Jessica L. Otten – Exercise and Sport Science Major
Faculty Research Mentor: Sharon Thompson

Diabetes is the seventh leading cause of death in the United States and leading cause of kidney disease and blindness. A survey with items on diabetics’ knowledge and beliefs about their disease was created and distributed (n=32) over 24 days to patients who sought care at a free community health care clinic in a Southeast Coastal area. The results will be entered into Excel and analyzed using frequencies, means and t-tests. Results will be discussed.

The Quest for a Bacteriophage Lytic to Staphylococcus aureus and Escherichia coli  (Poster Presentation)
Derek Pride – Biology Major
and Riane Petersman
Faculty Research Mentor: Paul Richardson

There is a growing medical concern regarding bacterial resistance to antibiotics. Therefore, the quest to find an alternative treatment for bacterial infections through the use of bacteriophages was undertaken. A bacteriophage (phage) is a virus that solely infects bacteria, and they are commonly found behind the ear and inside the nostrils. Human participants volunteered to be swabbed in these locations in attempts to sequester phages for additional study. The samples were filtered and plating techniques were performed to identify the potential presence of phages; capable of lysing Escherichia coli (E. coli) or Staphylococcus aureus (S. aureus). Once found, the lytic phage would be isolated and classified using polymerase chain reaction (PCR) and gel electrophoresis.

The Discovery of Novel genes amplified during tail regeneration of Anolis carolinensis  (Oral Presentation)
Danielle R. Ravancho – Biology and Marine Science Major
Faculty Research Mentor: Michelle Barthet

The mechanism of tail regeneration after autonomy is examined in recently sequenced model organism, Anolis carolinensis, to determine the presence of novel genes during the regeneration period. The technique of differential display was utilized to discover such genes involved in the process. Identification of these genes may indicate some aspects of the regenerative mechanism in reptiles that may be attainable in mammals, namely humans.

Call a Vegetable a Vegetable: Perceptions and Taste Ratings  (Oral Presentation)
Janel Reeves – Biology and Exercise/Sports Science Major
Faculty Research Mentor: Sharon Thompson

Research is mixed regarding how nutritional value of food can influence perceptions about taste, particularly among children. This study examined 51 elementary age children’s perceptions of vegetable-enhanced snacks and milk substitutes prior to and after tasting. A paper-pencil survey was used which included a three-point Likert-type scale. T-tests were analyzed to determine significant changes in perceptions of ratings. Results indicate consumption of vegetable enhanced foods or milk substitutes may be encouraged without deception.
In an effort to add to the existing knowledge about the failed Russian democracy, I conduct a case study of Russian democracy, based on six elements identified by Robert A. Dahl that are necessary for the successful modern democracy. I hypothesize that the lack of success of the democratization in Russia is a result of the Russian mentality of apathy and submission that is so deeply embedded in the foundation of the civil society.

**Assessing Perceptions and Attitudes of an Extreme Sports Park in the Myrtle Beach Area** *(Oral Presentation)*
Taylor Richard – Marketing Major
Desiree Fair, Victoria Wilkins and Deandra Lipscomb
Faculty Research Mentor: Monica Fine

Action sports have been on the rise in the last decade with such events as the X-games. A new action sports park is in the works for the Myrtle Beach, South Carolina, area. The park would include extreme sports such as surfing, wakeboarding and skateboarding. Specifically, the Grand Strand area is seeking a tourist attraction that would be sustainable during the shoulder and low seasons. The park will feature state-of-the-art technologies that produce consistent waves for surfing 12 months a year. With over 10 million surfers worldwide this has been deemed an attractive target market for South Carolina’s newest tourist attraction. The park will also offer a family waterpark, dining, shopping and nightlife opportunities. The purpose of this study is to develop a literature review of the relevant studies related to the action park. Next, we use focus groups to determine perceptions and attitudes of eight to 12 people that fit our target market. Lastly, we will create a survey to distribute the survey, analyze and interpret the results.

**Biomaterial Development for the Removal of Metal Contaminants in Water** *(Poster Presentation)*
Valoria Ritter, Lance McDaniel and Green Jackson – Biochemistry Major
Faculty Research Mentor: Rachel Whitaker

Heavy metal contamination of drinking water is common and is becoming more of a problem as the world-wide pollution continues to rise and more countries become industrialized. Metal ions are highly soluble in water and are therefore difficult to remove. To address these water-quality concerns, our research focus aims to develop a novel biomaterial that would be biodegradable and allow for the efficient removal of metal ions from water. The biomaterial will be composed of RNA (ribonucleic acid) tethered to biodegradable support structures.

**Power Poses and Self-Esteem** *(Oral Presentation)*
Anthony Roddrecia – Psychology Major
Faculty Research Mentor: Joan Piroch

A study was conducted to examine power poses and self-esteem. Thirty-three students were assigned to one of three pose groups (high power, low power, control). Each participant maintained a standing pose for one minute. Then subjects completed a self-esteem survey. It was hypothesized that the high power pose group would have higher self-esteem. The results did not support the hypothesis. Perhaps power was not embodied by the subjects as a function of pose.

**Embodiment: Dirty Hands versus Dirty Mouths** *(Oral Presentation)*
Stephen Rodgers – Psychology Major
Faculty Research Mentor: Terry Pettijohn

This study will be conducted by looking at the embodiment of moral purity based on a “dirty mouth,” which is a voicemail recording or, “dirty hands,” which is through typing an email. If primed unethically by hand via email, the participant will be more willing to take home the sample size hand sanitizer. When primed unethically by mouth via voicemail, the participant will be more willing to take home the sample size mouth wash. In addition, the selected product will be rated highly desirable and the mouth or hand category of products will be rated as more desirable depending on modality of the moral transgression.

**Biking in Kind Environments: Study of Attitudes and Knowledge of Bicycle Safety** *(Oral Presentation)*
Dori Sanders – Exercise and Sports Science Major and Chelsea Thomas
Faculty Research Mentor: Sharon Thompson

Research has shown that there is a greater need for bicycle safety and driver education in South Carolina due to an increase in the number of deaths over the past five years. The study was conducted in Horry County on those who reside in the area, as well as those who are visitors. An electronic version was accessible through city and business webpages. Results were analyzed using percentages, means, chi square and t-tests. Findings related to community member’s attitudes and beliefs regarding bicycle safety will be discussed.

**Retrospective Review Comparing Crossed-screw and Locking Plate Fixation of Hallux Metatarsophalangeal Joint Arthrodesis** *(Oral Presentation)*
Michael G. Sarson – Biology Major
Faculty Research Mentor: James Wright

Traditionally in the surgical management of patients suffering advanced disease of the metatarsal-phalangeal joints of the foot, crossed screws have been the gold standard. In recent years there has been a shift in orthopaedic surgery to the use of locking plates in the treatment of this disease with biomechanical fixation. The current study was undertaken to determine the most favorable outcome by comparing rate of nonunion, clinical result, operative/union time and implant cost.

**Digital Archiving of Black WWII Soldiers** *(Oral Presentation)*
Steven Sargent – History Major
Faculty Research Mentor: Maggi Morehouse

Digital archiving is quickly becoming a staple in the methodology of historical research. Researchers are utilizing and developing new methodological skills with digital repositories. Digital archiving is still a work in progress; it is up to researchers and archivists to build this repository. This presentation will highlight my work with Maggi Morehouse and the Avery/Lowcountry Digital Library in the pursuit of digitizing both analog and oral documentation regarding the accounts of black WWII soldiers.
We have demonstrated the utility of a new diphenylphosphoric acid catalyzed Friedel-Crafts reaction between indole and N-tethered allylic alcohols on a variety of substrates. To expand the scope of this reaction, two new substrates have been investigated. First, the use of allylic alcohols tethered to the 3-position of indole and second, N-tethered allylic alcohols on pyrrole. These reactions will show the generality of the reaction and provide access to new natural products.

**Bioremediation of Aquatic Ecosystems using Engineered Laccases for the Degradation of Ethynylestradiol and Bisphenol-A** (Poster Presentation)

Cody Smith – Biology Major  
Faculty Research Mentor: Rachael Whitaker

Bioremediation of aquatic ecosystems is vital to maintain the health of our environment. Researchers have engineered organisms to metabolize anthropogenic pollutants with limited success. In contrast to adding foreign organisms to aquatic ecosystems, we believe that effective bioremediation can be accomplished by adding preparations of enzymes directly to water in sewage treatment plants, effluents from paper mills or to natural water systems. Researchers have identified the enzyme laccase from *Trametes versicolor* as a potential candidate for bioremediation. It has been shown that this laccase-enzyme can oxidize natural estrogens, nonylphenol, bisphenol-A, polychlorinated biphenyl compounds (pcb) and many other cyclic anthropogenic pollutants. The success of using laccase to bind-to and oxidize cyclic anthropogenic pollutants is profound. The significant drawbacks of using laccase in bioremediation efforts have been that first, laccase's optimal pH is ~5.0, second, expression and purification of laccase in bulk has been difficult, and third, the temperature range of activity and stability of laccase is limited. We have devised a way through biotechnological break-throughs to generate in bulk the laccase enzyme. From this point, we aim to evolve laccase to increase its environmental tolerances.

**Characteristics and Effects of Muscular Dystrophy in Broiler Chickens** (Oral Presentation)

Kayla Smith – Biology Major  
Faculty Research Mentor: Michelle Barthe

Many cases of muscular dystrophy, caused by a point mutation in an exon of the WWP1 gene, have been seen in broilers, chickens raised specifically for meat production (Matsumoto et al. 2008). Many different phenotypes have been used to characterize muscular dystrophy in chickens. Some of these characteristics include an inability of the chicken to raise itself from a flat surface, drooping neck and a poor appetite. We analyzed clutches of chicks from a local farm that displayed phenotypic characteristics of muscular dystrophy. DNA was extracted and a region of the WWP1 gene amplified and sequenced for comparison. We have identified a novel mutation in an intron region of WWP1 that may contribute to the muscular dystrophy phenotype. Matsumoto H., Maruse H., Inaba Y., Yoshizawa K., Sasazaki S., Fujiwara A., Masahide N., Nakamura A., Takeda S., Ichihara N., Kikuchi T., Mukai F., Mannen H. 2008. The ubiquitin ligase gene (WWP1) is responsible for the chicken muscular dystrophy. FEBS Letters. 582: 2212-2218.

**Experience of Graduating Seniors Correlating with Difficulty of Landing a Job in Their Profession** (Oral Presentation)

Tahzeneka Stanley – Communication Major  
Faculty Research Mentor: K. Holody

With a chaotic economy and a devastating unemployment rate in America, it is hard for college graduates to find a job right out of college, making it hard for them to support themselves. I want to see if having a high GPA, job experience or good critical thinking skills give students a good chance of getting the job in their profession despite the economic storm. I would like to research the relationship between the work experience of students and the chances of a smooth or hard transition for them going into the workforce.
• Augmented Reality and the Future of Technology  
  (Oral Presentation)  
  Alexander Tavernier – Art Studio Major  
  Faculty Research Mentor: John Schiro

With the rapid advancement of modern technology, Augmented Reality is a concept that has recently shown tremendous growth and promise for the future. A.R. encompasses any technology that modifies the real world with computer-generated input. My research over the past year has led me to explore potential uses of this new technology.

• Development of a DNA Fingerprinting Protocol for Differentiation between Bacteriophages in Aquatic Environments  
  (Poster Presentation)  
  Nicholas A. Thurn – Biochemistry Major  
  and Caitlyn Baker  
  Faculty Research Mentor: Paul E. Richardson

Bacteriophages show potential in limiting aquatic bacterial populations through their lytic properties. It is estimated that there are 10^4–2 x 10^7 viral particles per milliliter of seawater. Current molecular techniques based on genome size have suggested that viral communities from coastal waters contain thousands of genotypes and have only been able to detect viruses that make up around one percent of the total viral community. Currently, a protocol to differentiate bacteriophages by restriction fragment length pattern of DNA is being developed.

• Investigating Maturase Evolution  
  (Poster Presentation)  
  Romi Trabolsky – Biology Major  
  Faculty Research Mentor: Michelle Barthet

MatK is the only group II intron maturase encoded in the chloroplast genome of land plants. MatK is a rapidly evolving protein and considered the “missing-link” in intron splicing evolution. No crystal structure exists for a group II intron maturase. The aim of our study is to clone and express MatK protein as a first step to generate a crystal structure for this important enzyme. A crystal structure for MatK may provide information on splicesome evolution.

• Survey Interpretation and Data Analysis of Coastal Cycles  
  (Oral Presentation)  
  Ina Troutman – Biochemistry Major  
  Faculty Research Mentor: Sharon Thompson

Using alternative means of transportation can help reduce traffic, promote healthy lifestyles and decrease negative environmental impacts. An online survey was distributed to all Coastal Carolina University students in order to evaluate the Coastal Cycles program, to identify transportation use and to increase awareness for improvements on campus. It was determined that only 35 percent used environmental friendly transportation. Also, safety concern was the number one reason students did not ride a bicycle, followed by a lack of sidewalks/trails.

• Sex Determination of Bottlenose Dolphins from Dorsal Fin Photo-Analysis  
  (Oral Presentation)  
  Jacob Wade – Marine Science Major  
  Faculty Research Mentor: Rob Young

Due to the bottlenose dolphins’ (Tursiops truncatus) physiological characteristics and aquatic nature, it can be difficult to determine gender from field observations. Rowe and Dawson (2009) developed and tested methods for sex determination of dolphins in Australia using dorsal fin features, resulting in >90 percent accuracy. In this study, I will test their methods on a novel population, using dorsal fin images from South Carolina dolphins of known sex.

• d-amino Acid Inhibitory Properties on Staphylococcus aureus and Escherichia coli Growth  
  (Poster Presentation)  
  Jordan Wesel – Biochemistry Major  
  and Ina Troutman  
  Faculty Research Mentor: Paul Richardson

The over-prescription and misuse of antibiotics has resulted in antibiotic resistant strains of bacteria. In order to combat these evolved strains, the scientific community must develop new treatments. A potential new option is using D-amino acids as a bacteriostatic agent. D-amino acids are important components of bacterial cell walls, but are unusable for protein synthesis, where only the “l-”enantiomers are utilized. If D-amino acids were incorporated into the proteins, it would severely deform the protein and render it useless. The “d-“conformation has the potential to slow and perhaps halt bacterial cell wall synthesis. Given this, the D-amino acids methionine, leucine and phenylalanine, will be tested for potential inhibitory effects on the gram-negative bacteria Escherichia Coli, and the gram-positive bacteria Staphylococcus aureus.

• Effect of Grape Seed Extract in Fruit Fly Drosophila Huntington’s Disease Model  
  (Oral Presentation)  
  Breanna Willeford – Biology Major  
  Sierra Willeford and Duncan Perry  
  Faculty Research Mentors: Fang Ju Lin and Tianyi Wu

Huntington’s disease is a devastating neurodegenerative disorder, with deficits in cognitive and motor function. It has been reported that grape seed extract (GSE; 2.8 mg/ml) extends the lifespan of transgenic Drosophila carrying a mutant human Huntington gene. In this study, we aim to develop a valid screening using Drosophila for potential compounds such as GSE that could slow down the progression of disease, as currently there is no cure for Huntington’s disease.