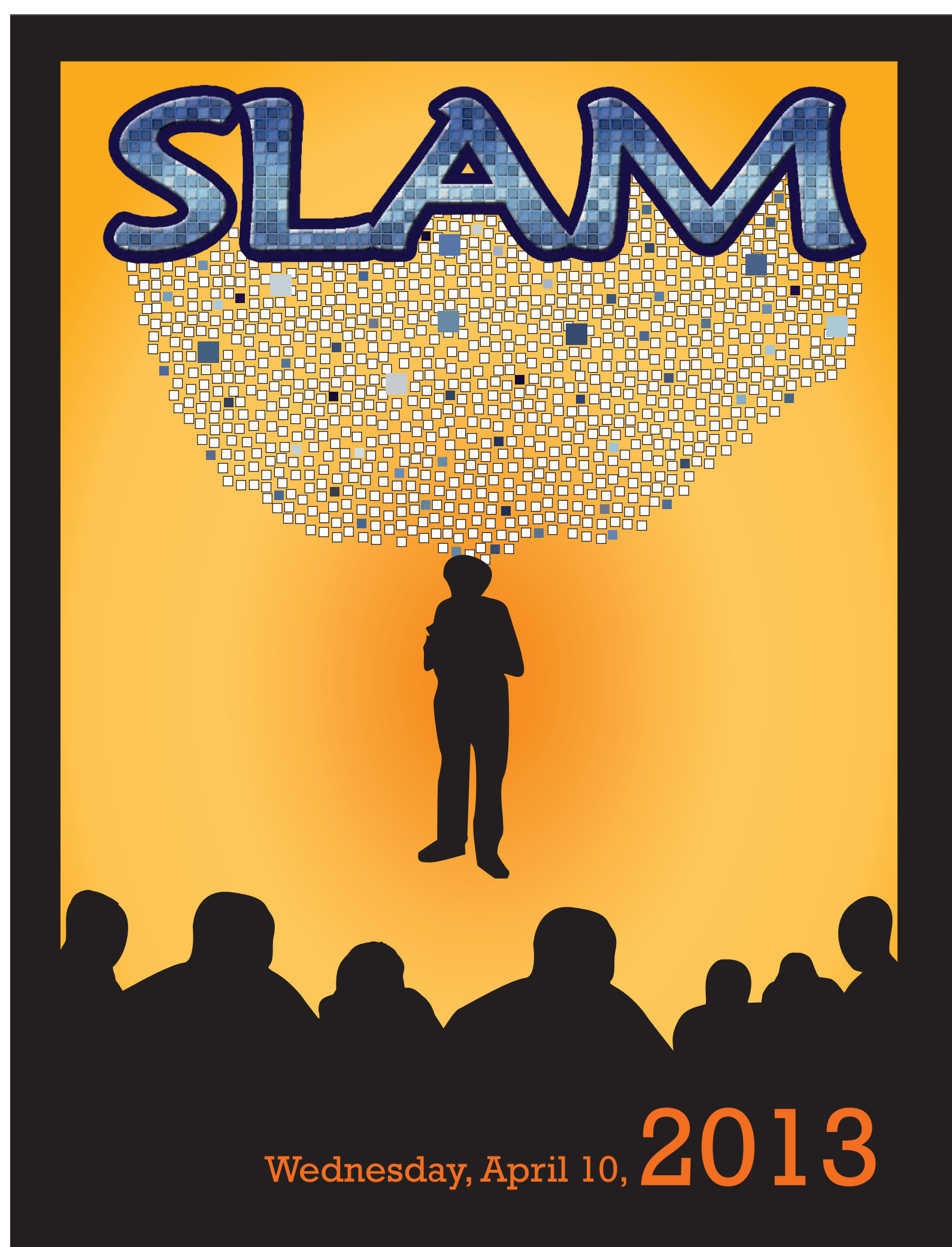


Mars Hill College
Mars Hill, NC 28754
www.mhc.edu/SLAM



ORDER OF CEREMONIES

*In the One Hundred Fifty-seventh Year of Mars Hill College
April 10, 2013
Moore Auditorium*

THE FANFARE: Mars Hill College Percussion Ensemble

8:45 A.M.

*Corey Brown, Sam Cobb, Charles Edwards, Jonathan Leonard,
Josh Linhart, Anthony Sabatino, Colton Stewart, Austin Williams
with special guests: Vinnie Agrusa and Brett Anderson*

Dr. Brian Tinkel, director

OPENING CELEBRATION

9:00–9:20 A.M.

The Invocation

Brett Pardue
Voice Performance Major

The Vice President's Welcome

Dr. John Wells
Executive Vice President

Welcome from the SLAM committee

Dani Franco
Social Work Major

Charge to the Students, Faculty, and Friends

Mrs. Joy Clifton
Instructor of Physical Education

Student Liberal Arts Mosaic
... of Research, Performance, and Creativity

SESSION I: ORAL PRESENTATIONS

9:30–10:15 A.M.

Session I-A: Truth or Consequences

Location: Belk Auditorium

Changing Construal Levels for College Students Concerning Their Careers

Shelly Dunnivant
Psychology Major

*Therapeutic Techniques for Treating Painful or Traumatic Memories:
Pharmacology versus Depth Psychotherapies*

Hillary Modlin
Psychology Major

Session I-B: Consider the Source

Location: Owen Theatre

*The N:P Ratio; A Potential Indicator of the Source of Fecal
Contamination in a Water Body*

Joo Kyung Esther Kim
Biology and Chemistry Major

Clickety Clack: Bringing Appalachian Tradition Back

Julie Bolling
English Education Major

Sylas Owen
Biology Major

Mary Bolster
Elementary Education Major

Melissa Stuckie
Physical Education Major

Heather Boyd
Middle Grades Education

CJ Tate
Sociology Major

AnnMarie Knight
Elementary Education Major

Alex Vines
Elementary Education Major

Session I-C: Hot Spots

Location: Broyhill Chapel

Bailey Mountain: From Historic Symbol to Community Asset

Brady Adcock
Business and Religion Major

*How Temperature Affects Reproduction Rate in Asian Clams (*Corbicula fluminea*)*

Becca Symons
Zoology Major

Session I-D: Building: Boon or Bust?

Location: Nash

Effects of Construction on Total Suspended Solids, Turbidity, and Conductivity Along Little Crabtree Creek

Christian Diaz
Chemistry Major

“Honest-to-Goodness Work” Madison County and the New Deal

Dana Holcombe
History Major

Session I-E: “Creationism”

Location: Peterson

Caliph ‘Umar: Justification of the Islamic Expansion

Ben Phillips
History and Religion Major

Bringing Mars Hill College Back to the Future

Sherridan Bigg
Biology and Spanish Major

Alexis Miller
Musical Theatre Major

Jessica Britt
Psychology Major

Adam Mincey
Biology Major

Garrett Burrell
Biology Major

Codie New
Sociology Major

Terry Chavis
Biology Major

Michelle Payne
Political Science and History Major

Erin Condon
Zoology Major

Margaret Redford
Athletic Training Major

Jordon Crawford
Zoology Major

Miranda Stephens
Psychology and Spanish Major

Hayden McGinnis
Biology Major

Reba West
Sociology Major

Student Liberal Arts Mosaic
... of Research, Performance, and Creativity

Session I-F: Making Contact

Location: Band Room

Appalachia 2.0: Using Social Media to Virtually Experience a Unique Culture

Katie Terry
Business Major

Concussion in Youth Sports: A Head Game

Zach Tomkinson
Athletic Training Major

Session I-G: No Dog in This Fight

Location: Ferguson 135

A Search for p53 and PCNA Expression in Canine Epithelium Tumor Cells

Kyle Moore
Biology Major

Tribal Relations in Early 7th Century Medina: Mohammad and the Medina Charter

Andrew Greer
History and Religion Major

Session I-H: “Breaking Bad”

Location: Fellowship Hall

*“We’re All Peddlers of the Apocalypse”: Chernobyl and its
Imprint on the Ukrainian People*

Rachel Rogers
History Major

*Medial Malleolus Fracture and Peroneal Tendon
Dislocation In a NCAA Division II Collegiate
Female Soccer Player*

Tonya Gruel-Wright
Athletic Training and Physical Education Major

INTER-SESSION Snack Break

**10:15-10:30 A.M.
Near Oral Session Venues**

SESSION II: ORAL PRESENTATIONS

10:30–11:15 A.M.

Session II-A: Silver Linings

Location: Belk Auditorium

Hope for Haiti: A Look Into Our Alternative Spring Break Trip

Olivia Buckner
Art Education Major

Shelby Johnson
English Major

Kristen Pace
International Studies Major

Margaret Redford
Athletic Training Major

Alex VanDusen
Zoology Major

The Death of Bacteria: Using Silver NHC Complexes to Kill the Intruders

Chris Platt
Chemistry Major

Session II-B: The Transformers

Location: Owen Theatre

Correlation between Angiogenesis and p53 Tumor Suppressor Expression

Zach Allender
Biology Major

*The Difficulty with Defining a People: Exploring “Irishness” Through
the Life and Lens of James Joyce*

Corrine Roberts
English Major

Student Liberal Arts Mosaic
... of Research, Performance, and Creativity

Session II-C: “Dirty” Sex

Location: Broyhill Chapel

*Sulfur, Phosphorus, Nitrogen and Carbon Concentrations In Soil Samples
Taken From Organic vs. Non-organic Farms*

Stephanie Bunnett
Biology Major

Sex Sells

Heather Huckabee
Political Science Major

Session II-D: Mystical States

Location: Nash

*The World at Home: China as Seen by the American Public
Through National Geographic Magazine*

Sarah Wilson
History Major

Mystical States of Consciousness and Their Relation to Authority

Derek Gibson
Philosophy Major

Session II-E: Tough Stuff

Location: Peterson

*Slavery in the Neighborhood: The Vance Birthplace Historic
Site And the Tough Stuff of U.S. History*

Cody Clifton
History Major

Dana Holcombe
History Major

Laken Pilgrim
History Major

Ashley Spears
History Major

Paige West-Fisher
History Major

Stem Cell Therapy for Spinal Cord Injuries

Regis Mawire
Athletic Training Major

Session II-F: Brain vs. Brawn

Location: Band Room

*Get Your Head in the Game: Long-Term Neurodegenerative
Changes in Athletes Suffering From Multiple Concussions*

Anna Richt
Athletic Training Major

“Richmond’s Jim Crow and the Two Paths to Seek Equality, 1954 – 1968”

Chelsea Parker
History Major

Session II-G: Raw Crude

Location: Ferguson 135

Health Effects of a Raw Food Diet: Balancing Your Inner pH

Alyssa Morris
Athletic Training Major

*Blessed by Boom, Vexed by Vice, The Social and Economic Impact
of Spindletop Oil on Beaumont, Texas 1901-1920*

Joshua Dean
History Major

Student Liberal Arts Mosaic
... of Research, Performance, and Creativity

Session II-F: The Spice of Life

Location: Fellowship Hall

Cinnamon Oil: Nature's Answer to Antibiotic Resistant Bacteria

Adam Mincey
Biology Major

Social Change Model of Leadership: Two Approaches

Peter Appenzeller
Political Science Major

Kelly Jones
Physical Education Major

Haeley Baker
Business Administration Major

Anje Kidd
Zoology Major

Emily Beck
Mathematics and Religion Major

Grace Lancaster
Zoology Major

Kristin Bristol
Elementary Education Major

Laura Lewis
Music Education Major

Clay Bunch
Biology Major

Connor McGillicuddy
Major Undecided

Eric Condon
Zoology Major

Hayden McGinnis
Biology Major

Anna Dillon
Elementary Education Major

Sean McNamara
Computer Science Major

Aeriel Ellis
Chemistry Major

Michael Melville
Business Administration Major

Derra Gouge
Music Education Major

Dawn Radford
Biology Major

Ericka Hincke
Biology Major

Leah Taylor
Sociology Major

Chelsea West
Music Education Major

INTER-SESSION Snack Break

11:15-11:30 A.M.
Near Oral Session Venues

SESSION III: PLENARY SESSION

11:30 A.M.–12:15 P.M.
Location: Moore Auditorium

Introduction of the Speaker

Dr. Teresa Sumpter
Professor of Music
SLAM Committee Representative

Michael J. Ruiz
Professor of Physics
UNC Asheville

***Harmonic Secrets: How Basic Physics
Reveals the Beauty of Music***

Student Liberal Arts Mosaic
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LUNCH BREAK

12:15–1:30 P.M.

**Location: Pittman Dining Hall
or on your own**

SESSION IV: ARTS BREAK

1:30 – 2:30 P.M.

**Each “Act I” performance lasts 20 minutes.
After a 10-minute intermission, the performances
will be repeated during “Act II.”**

Please use the intermission to change locations.

This makes it possible to attend a second Arts Break event.

1:30 P.M.

“Act I”

Arts Break-A

Location: The Loft

Schoolhouse of Step

Kenny Anderson
Political Science Major

Joselyn Gorman
Major Undecided

Allison Carson
Psychology Major

Katana Jenkins
Music Education Major

Terry Chavis
Biology Major

Teona McCain
Business Major

Jazmin Goodson
Music: Voice Major

Brett Pardue
Voice Performance Major

Elizabeth Smith
Social Work Major

Arts Break-B

For Your Entertainment: A Musical Theatre Extravaganza

Heather Bronson
Musical Theatre Major

Justin Gaylard
Musical Theatre Major

Steven Green
Musical Theatre Major

Savannah Hayes
Musical Theatre Major

Location: Owen Theatre

Alexis Miller
Musical Theatre Major

Melanie Grace Morton
Musical Theatre Major

Sarah Emily Richardson
Musical Theatre Major

Annie Elizabeth Tesh
Musical Theatre Major

Tyler Winkler
Musical Theatre Major

with Virginia McKnight on Piano

Arts Break-C

An Exploration of the Piano Recital

Location: Broyhill Chapel

Vinnie Agrusa
Piano Performance Major

Arts Break- D

Music from Phi Mu Alpha, the Professional Music Fraternity

James Fehr
Music Major

Mike Gomez
Music Education: Clarinet Major

Daniel Luper
Music Education: ClarinetMajor

Location: Choir Room

Arialdys Pimentel
Music Education: Horn Major

Bradley Smith
Music Education: Saxophone Major

Dalton Woody
Voice Performance Major

Student Liberal Arts Mosaic
... of Research, Performance, and Creativity

Arts Break-E

Location: Peterson

Cadenza 2013: It's Retroactive

Tricia Ellis
Apparel & Interior Merchandising and English Major

Heather Lane
Art and English Major

Becca Johnson
English Major

Jessica McLean
English Major

Caroline White
English Major

Arts Break-F

Location: Moore

Clogging: Keeping Time with Tradition

Julie Bolling
English Education Major

Sylas Owen
Biology Major

Mary Bolster
Elementary Education Major

Melissa Stuckie
Physical Education Major

Heather Boyd
Middle Grades Education Major

CJ Tate
Sociology Major

AnnMarie Knight
Elementary Education Major

Alex Vines
Elementary Education Major

Intermission

2:00 P.M.

“Act II”

*All performances from “Act I” will be repeated during “Act II.”
Please attend a second Arts Break event.*

INTER-SESSION Snack Break

2:30–2:45 P.M.
Near Oral Session Venues

SESSION V: ORAL PRESENTATIONS

2:45–3:30 P.M.

Session V-A: Back to our Roots

Location: Belk Auditorium

*“...Never Said a Mumblin’ Word”: African American Music From Slavery—
Biblical Roots, Political Meanings, and Social Implications*

Sumner Rhodes
Religion and Music Major

Genie in a Bottle. What Does Your Test-Tube Say About You?

Jill Biediger
Athletic Training Major

Session V-B: Misery Loves Company?

Location: Owen Theatre

Alligator mississippiensis and the Effects of Capture on Sex and Stress Hormones

Miranda Schmidt
Zoology Major

Les Misérables, l’histoire du siècle (The Story of the Century)

Shelbie English
English Major

Andrew Hebert
Music: Voice Major

Rachel Louviaux
Apparel & Interior Merchandising and Political Science Major

Maia Sanders
Music Education Major

Lyn Wiseman

Student Liberal Arts Mosaic
... of Research, Performance, and Creativity

Session V-C: Moving Forward/Holding Back

Location: Broyhill Chapel

A World of Music: Self-directed Learning

Brett Pardue
Voice Performance Major

Ethical Consideration of the Conscious Animal

Joseph Lancaster
Religion and Philosophy Major

Session V-D: Cultural Warriors

Location: Nash

Cloaking Classical Literature

Corrine Roberts
English Major

Beautiful Souls, Warrior Hearts

Michelle Payne
Political Science and History Major

Session V-E: Change Makers

Location: Peterson

Live Storytelling as a Vehicle for Building Community and Diversity Appreciation

Heather Lynn Huckabee
Political Science Major

Nick Smith
Recreation and Sport Management Major

Shelby Johnson
English Major

Melissa Stuckie
Physical Education Major

Andrew Little
History Major

Jessica Viscusi
Chemistry Major

Victor Sloan
Religion Major

Caitlin Whitt
Elementary Education Major

*Evidence of Increase in Mrp1 (Abcc1) Activity in Mrp4-/-
Mouse Choroid Plexus Epithelium*

Terry Chavis
Biology Major

Session V-F: Horse of a Different Color

Location: Band Room

The Insider/Outsider Dilemma and the Study of Religions

Christina Dalamangas
Biology and Religious Study Major

*Horses, Robots, and Physical Therapists: Diverse Approaches
to Rehabilitation for Cerebral Palsy*

Margaret Redford
Athletic Training Major

Session V-G: Worth its Weight in Silver?

Location: Ferguson 135

Synthesis of 4-Hydroxyquinazolinone with Silver Derivatives

Andrew Brandt
Chemistry Major

Women and Sexual Inequality in the Code of Hammurabi

Octavia Stancil
Religion and Political Science Major

Student Liberal Arts Mosaic
... of Research, Performance, and Creativity

Session V-H: Untying the Knot

Location: Fellowship Hall

*How does an Abstract Form of Mathematics, Known as Knot Theory,
Applied to Other Sciences Such as Biology and Chemistry?*

Aaron Rapp
Mathematics Major

Kick Your Class: An Exploration of Social Class at Mars Hill College

Matt Bresson
Zoology Major

Steven Bryan
Sociology Major

Sheri Christopher
Education Major

Christina Dalamangas
Biology Major

Autumn Rice
Education Major

Justin Stewart
Education Major

CLOSING CELEBRATION

3:45 P.M.
Location: Moore Auditorium

The MHC Student Liberal Arts Mosaic ...of Research, Performance, and Creativity

Mission Statement

The Mars Hill College Spring SLAM:

- showcases student research, performance, and creativity
- provides an opportunity for the Mars Hill College community to celebrate, recognize, and promote student accomplishment across a range of academic pursuits
- fosters and encourages a campus culture that honors and rewards the hard work, dedication, and discipline that lead to success and achievement in liberal education, in professional life, and in the world

The Spring SLAM provides an opportunity for Mars Hill College students to exhibit their creativity and energy to an audience that includes not only the entire campus community (students, faculty and staff), but also the wider college family (trustees, alumni, and friends of the college). During the sessions, panels, and exhibits of the Spring SLAM, students present the best of their work in a wide variety of subject areas and formats, sharing it in a spirit of intellectual competition and cooperation.

Presentation Abstracts

J. Brady Adcock, *Bailey Mountain: From Historic Symbol to Community Asset*

Within my first week at Mars Hill, I had already gazed upon Bailey Mountain with wonder. How can I summit the Mountain that has given its name to our national championship clogging team, newest dorm building, and several local roads? Mars Hill College is proud of its location in the southern Appalachian Mountains, yet students and community members must drive miles to access public trail systems. The Hoffman Foundation has set aside 212 acres for conservation and recreational use. The development of a trail system on this property has the potential to improve retention, market the school, promote community development, serve as an extension of the classroom, and offer work-study and volunteer opportunities. Through interviews, exploration, community involvement, and networking, I have acquired the resources to complete the development of a trail system on the Bailey Mountain property. This presentation integrates budgets, timelines, campaigning materials, property history, and GIS mapping.

Vincent Agrusa, *An Exploration of the Piano Recital*

The outward appearance of a piano recital is, to most people, all about the actual performance. However, the life of concert pianists and their recitals go far beyond just the rendering of the notes and rhythms on the page. In order to be fully involved in the interpretation of a piece of music, musicians must first comprehend its place in history and the milieu in which it was created. My recital will feature the performance and discussion of the Prelude and Fugue in F-sharp Minor from the first book of the Well-Tempered Clavier by Johann Sebastian Bach, the First Movement of the Sonata in D Major, Op. 10, No.3 by Ludwig van Beethoven, and the Nocturne in B-flat Minor, Op. 2 No. 1 and the Etude in G-flat Major, Op. 10, No. 5 (“Black Key Etude”) by Frédéric Chopin.

James Z. Allender, *Correlation between Angiogenesis and p53 Tumor Suppressor Expression*

Is a well-known tumor suppressor protein which has been termed the “guardian of the genome.” This protein becomes activated due to a number of stress signals and has a wide range of functions in the cell including but not limited to apoptosis, regulation of transcription, and regulation of the cell cycle. Additionally, angiogenesis—the formation of new micro-vascular tissue, is essential for the growth and progression of cancer development. In the present study, canine tumors were collected from local veterinarians and analyzed histologically. These tumors will be typed and a correlation between p53 expression and angiogenesis as determined by CD31 immunohistochemical evaluation will be queried. Due to the anti-tumorigenic properties of p53 and the requirement for angiogenesis in tumor formation, a negative correlation between p53 expression and angiogenesis is expected.

Peter Appenzeller, Haeley Baker, Emily Beck, Kristin Bristol, Clay Bunch, Eric Condon, Anna Dillon, Aerial Ellis, Derra Gouge, Ericka Hincke, Kelly Jones, Anje Kidd, Grace Lancaster, Laura Lewis, Connor McGillicuddy, Hayden McGinnis, Sean McNamara, Michael Melville, Dawn Radford, Leah Taylor, Chelsea West, *Social Change Model of Leadership: Two Approaches*

The Social Change Model as applied to YOU! The Mars Hill Honors program is using the Social Change Model of Leadership Development to address immediate social issues, specifically children in a foster home and individuals affected by homelessness. Learn how we have discovered how to apply the “Seven C’s of the Social Change Model” (Citizenship, Common Purpose, and Controversy with Civility, Consciousness of Self, Congruence, Commitment, and Collaboration) to our personal, group and community lives. We have utilized the social change model in the development of two projects that benefit the community, a carnival to raise funds for Eliada Home and a talent night to assist Homeward Bound. Hear about our journey in group formation and leadership and join our movement to help the community!

Kenny Anderson, Allison Carson, Terry Chavis, Jazmin Goodson, Joselyn Gorman, Katana Jenkins, Teona McCain, Brett Pardue, Elizabeth Smith, *Schoolhouse of Step*

The M. Hill Steppers is an organization bringing African-American cultural aspects to the campus and giving all students another way to express themselves and foster new relationships. The Schoolhouse of Step is our theme for the Slam Arts Break, which will be introducing the art of Stepping to all of the Mars Hill community. Stepping is a form of percussive dance in which the participant's entire body is used as an instrument to produce complex rhythms and sounds through a mixture of footsteps, spoken word, and handclaps. The tradition of African stepping is rooted within the competitive schoolyard song and dance rituals practiced by historically African American fraternities and sororities, beginning in the mid-1900s. It takes weeks and weeks of determination and practice to put together an exciting, crowd-pleasing step show, and we will be sure to wow the crowd.

Jill Biediger, *Genie in a Bottle. What Does Your Test Tube Say About You?*

Athletes are always told by the NCAA that “what you don't know can hurt you” when it comes to supplement and substance abuse, but what if the phrase were referring to genetic disorders that an athlete is unaware of? There are various medical conditions that can predispose an athlete to injury, therefore disqualifying the athlete from participation. It is difficult for an athlete to learn that they have a genetic disorder that could end their career, that the disorder could not have been prevented, and that no cure exists. For some athletes, this could lead to a variety of feelings including a loss of identity because they can no longer play the sport they love. This presentation covers five genetic disorders—Marfan's Syndrome, cystic fibrosis, multiple sclerosis, hemophilia, and sickle cell trait – that can disqualify an athlete from participation at given levels of severity.

Sherridan Bigg, Jessica Britt, Garrett Burrell, Terry Chavis, Erin Condon, Jordon Crawford, Hayden McGinnis, Alexis Miller, Adam Mincey, Codie New, Michelle Payne, Margaret Redford, Miranda Stephens, Reba West, *Bringing Mars Hill College Back to the Future*

In an age of environmental sustainability and awareness, Mars Hill College lags behind the norm of even the most basic environmentalist efforts. This presentation examines the challenges involved with developing Mars Hill College into a more earth-friendly institution, and we propose that there is a need and a desire for increased environmental programs in the college community due to a campus-wide survey. The emergence of a new, centralized Student Environmental Center would create and implement environmental programs through volunteer efforts and the Work-Study system. Our initiatives will offer students a meaningful way to become directly involved with environmental efforts on campus, such as recycling, composting, and a community garden. Together, we can convert desires for sustainable improvements into concrete actions that will propel this college into a “greener” generation.

Julie Bolling, Mary Bolster, Heather Boyd, AnnMarie Knight, Syllas Owen, Melissa Stuckie, CJ Tate, Alex Vines, *Clickety-clack: Bringing Appalachian Tradition Back*

During the presentation demonstrations will be given on the many styles of clogging such as flat footing, buck, and contemporary. Using present dancers, we will share information with students/faculty on the teams origins and the impact it has had not only on the community, college, clogging world, and international locations but also on the students that came to MHC to pursue their love of dance. Students enjoy the entertainment and creativity of the Bailey Mountain Cloggers several times throughout their college experience, but they do not know the history, the sweat, and the heart and “soles” behind the dance. We will demonstrate the many different styles of clogging.

Student Liberal Arts Mosaic

. . . of Research, Performance, and Creativity

Julie Bolling, Mary Bolster, Heather Boyd, AnnMarie Knight, Sylas Owen, Melissa Stuckie, CJ Tate, Alex Vines,
Clogging: Keeping Time with Tradition

The Bailey Mountain Cloggers have been a huge part of Mars Hill College and the college's history and heritage since 1974. Since then BMC has evolved into a competition team that has won 20 national titles, traveled to many international locations and presented yearly concerts for the community and fans. Most students know BMC and the dancers but what they don't know is the history and behind the scenes. Clogging originated right here many years ago and we wish to bring light to not only the history of the dance but how it has evolved into the high-paced competitive event that it is today.

Andrew Brandt, *Synthesis of 4-hydroxyquinazolinone with Silver Derivatives*

Quinazolinone is an organic compound that has shown much promise in the past few decades for anti-bacterial uses. Silver has also been used since the middle ages for its antibacterial properties. It is believed that the incorporation of silver could greatly increase the potency of quinazolinone derivatives. If a stable compound can be made containing both the quinazolinone base and silver, a possible doorway to all kinds of medicinal uses could be opened. My goal is to attach a silver cation to the carbene carbon located on the imidazole ring along with other possible substituents to amplify the strength of the overall compound. The antibacterial efficacy will be tested to determine if these dual action compounds are more potent than the quinazolinone and silver compounds individually.

Matt Bresson, Steven Bryan, Sheri Christopher, Christina Dalamangas, Autumn Rice, Justin Stewart,

“Kick Your Class: An Exploration of Social Class at Mars Hill College”

As a Bonner PAGOS group, we studied social class inequality in Fall 2012. We began to wonder about the social class of students at Mars Hill College. We can find data for MHC students on gender, race, ethnicity, and religion but not on social class. Research shows that social class has a significant impact on academic and future occupational success. How do MHC students think about and experience social class? We adapted a survey used by researchers at the New York Times to fit a college student population. The survey was administered to a large representative sample of MHC students. This presentation of the data gathered in the survey will educate people at MHC about the importance of social class and “its implications for the way we live our lives,” (Class Matters, intro). It will also look specifically at the influence of social class for MHC students.

Heather Bronson, Justin Gaylard, Steven Green, Savannah Hayes, Alexis Miller, Melanie Grace Morton, Sarah Emily Richardson, Annie Elizabeth Tesh, Tyler Winkler with Virginia McKnight on Piano,

For Your Entertainment: A Musical Theatre Extravaganza

Historically, songs in musical theatre were written not just to fit the musical, but also to be sold on the radio. Composers and lyricists, who worked in Tin Pan Alley, wrote songs they knew would make a pretty penny. This is very similar to modern musical theatre. In every good show there is at least one song that the audience can go away whistling. In our presentation, we will highlight many numbers from musicals that do just this by performing songs from hit Broadway musicals, Cabaret pieces, and Disney productions. The most important factor in making a musical popular is its ability to relate themes to the audience. Our hope is to present these themes, while doing what we love best, entertaining. Amidst the fun of the show, tidbits of musical theatre history will be sprinkled on top, to make this delicious desert, even tastier.

Olivia Buckner, Shelby Johnson, Kristen Pace, Margaret Redford, Alex VanDusen,

Hope for Haiti: A Look into Our Alternative Spring Break Trip

During the week of March 8th-16th, this group traveled to Terrier Rouge, Haiti to serve with an organization called Bethlehem Ministry. This organization empowers the people of Haiti by supporting sustainable change through educational, economical, environmental, and medical initiatives. Our presentation will showcase Haitian history, the current socio-economic situation in Haiti, and the work that this team of students accomplished while in Haiti. This presentation represents part of the promise that this group has made to Bethlehem Ministry –to tell the story of Haiti in order to build awareness, inspire others, and develop a passion for the empowerment of Haiti.

Stephanie Bunnnett, *Sulfur, Phosphorus, Nitrogen, and Carbon Concentrations in Soils from Organic vs. Non-organic Farms.*

My research focused on whether soil samples collected from organic farms will contain higher concentrations of phosphorus, sulfur, nitrogen, and carbon, compared to non-organic farms. The soil samples were taken from three organic and three non-organic farms in the Mars Hill area. The relevance of this research is important because it focuses on a rapidly growing category of agriculture. This information can be used to determine whether the soil of food grown organically or commercially contains higher levels of the specified nutrients. I also believe that this presentation will be beneficial to anyone interested in furthering their knowledge about the origin and processing of organically grown foods compared to conventional ones. A Mars Hill Title III Student Research Grant funded this research.

Terry O. Chavis, *Evidence of Increase in Mrp1(Abcc1) activity in Mrp4-/- Mouse Choroid Plexus Epithelium*

The multi-drug resistance protein 4 (Mrp4) is a transporter in the choroid plexus (CP) that aids in the elimination of toxins and transport of important signaling molecules. Mrp4 is found on the apical membrane of endothelial cells and the basolateral membrane of epithelial cells in the CP. Studying the CP of knockout mice (Mrp4^{-/-}), we used immunoblot, semi-quantitative, and qPCR to examine the protein and gene expression in the wild type (WT) and Mrp4^{-/-} mice. We hypothesized that, in the absence of Mrp4, the activity of Mrp1 would increase. The qPCR analysis showed higher expression of Mrp1 in Mrp4^{-/-}, supporting our hypothesis that the activity of the Mrp1 would increase. Mrp1 and Mrp4 transport a range of similar organic anions (OA's); therefore, in the absence of Mrp4, Mrp1 could mediate the transport of similar OA's from cerebrospinal fluid (CSF) to blood.

Cody Clifton, Dana Holcombe, Laken Pilgrim, Ashley Spears, Paige West-Fisher,

Slavery in the Neighborhood: The Vance Birthplace Historic Site and the Tough Stuff of U.S. History

Most of the people who lived on the Vance farm in the decades before the Civil War were enslaved laborers. Yet visitors to the Vance Birthplace historic site, located in the Reems Creek valley just a few miles from Mars Hill, would almost certainly miss this crucial point. The fact of slavery is all but invisible in current site interpretation. Students in the Fall 2012 Public History class worked in consultation with staff members at the Vance site to develop a plan for improved slavery interpretation at the historic site. In this presentation, also presented this spring to the Appalachian Studies Association annual conference, they discuss the complicated journey that project launched, and share elements of the proposals they developed for site managers' consideration.

Student Liberal Arts Mosaic

. . . of Research, Performance, and Creativity

Christina Dalamangas, *The Insider/Outsider Dilemma and the Study of Religions*

A person's faith plays a big role in her own life in how she sees the world, how she sees others, and how she experiences purpose in life. But how does one as a religious scholar study religion? This study will look at ways a scholar can study her own religious tradition – as an insider, and other religious traditions – as an outsider. After look at some ways scholars study religions, an “insider/outsider analysis” will be applied to a previous study conducted by Christina Dalamangas in 2010-2011 while interviewing some religious leaders in the Christian and Jewish faiths. This study will show how understanding a person's religion encourages open-mindedness and a change in perspectives.

Josh Dean, *Blessed by Boom, Vexed by Vice, The Social and Economic Impact of Spindletop Oil on Beaumont, Texas 1901-1920*

Boom towns were essential in the development of the American West. In the United States boom towns typically refer to communities that experience sudden and rapid population and economic growth. While they brought great wealth and prosperity to areas, they also brought vices such as drinking, gambling, and prostitution. This presentation gives a specific example of Beaumont, Texas as a boom town and how the Spindletop oil strike affected the area both socially and economically. This research shows how the strike at Spindletop transformed Beaumont from a small, God-fearing community into a large city riddled by vice that many consider to be one of the greatest boom towns in U. S. History.

Christian Diaz, *Effects of Construction on Total Suspended Solids, Turbidity, and Conductivity along Little Crabtree Creek*

Construction is one of the major contributors to surface water pollution. Turbidity resulting from construction has been shown to interfere with many different factors in the aquatic community including reduced growth rates, decreased resistance to disease and the prevention of egg and larval development of a variety of species. This study focused on the efficiency of sediment fences, mulch, and seeding at preventing turbidity due to construction at times in four sites along Little Crabtree Creek which runs parallel to highway 19 between Burnsville and Micaville, NC. Suspended solids, turbidity, and conductivity were measured 6 times at these four sites between October 16, 2012 and March 26, 2013.

Shelly Dunnivant, *Changing Construal Levels for College Students Concerning Their Careers*

This research was based on construal level theory and regulatory focus, and investigated how college students select a major or career path and how that selection was perceived as they progressed through their college careers. The hypothesis was that low-level construals would be more salient for senior ranked students, regarding their upcoming career; whereas, freshmen would have more high-level construals about their future job prospects. This research also assessed how individual differences, affective forecast, and regulatory focus impacted the participants' perceptions of their future careers. The goal of this research was to evaluate how construal level changes over the course of a college student's journey, as well as to further explore the relationship between goal attainment, construal level, and time. Further, this study investigated how these relationships could be utilized to benefit college students, as well as advisors, when considering, selecting, and preparing for a career.

Tricia M. Ellis, Becca Johnson, Heather Lane, Jessica McLean, Caroline White, *Cadenza 2013: It's Retroactive* Cadenza, the Mars Hill College Literary and Art Magazine, showcases selections from the upcoming spring publication. Our magazine offers students an artistic venue that celebrates creativity. The theme for this year is “Sprightly Instruction.” This art break features students presenting and discussing their stories, poems, and art work.

Shelbie English, Andrew Hebert, Rachel Louviaux, Maia Sanders, Lyn Wiseman,

Les Misérables, l'histoire du siècle (The Story of the Century)

First published in 1862, *Les Misérables* is a French novel that is considered one of the greatest of the nineteenth century. It was one of Victor Hugo's most popular works, and has been the subject of numerous adaptations in various types of media, including films, plays, comic books and musicals. In this presentation, we will provide a brief biography of the author and an overview of the historical events depicted in the 2012 cinematic adaptation of the musical, as well as a showcase of its music in three solo performances.

James Fehr, Mike Gomez, Daniel Luper, Arialdys Pimentel, Bradley Smith, Dalton Woody,

Music from Phi Mu Alpha, the Professional Music Fraternity

When most people think of a fraternity, they think of a social group of people who party together. Phi Mu Alpha, on the other hand, is a professional group of men who work to advance music in America by performance and advocacy. We will be performing chamber music from the baroque, modern, and contemporary eras of classical music. These pieces will feature different fraternity brothers in a variety of ensembles, trios and duets including both woodwind and brass instruments. One of the pieces of music was even written specifically for this event by the Mars Hill music theory professor, Dr. Theisen.

Derek Gibson, *Mystical States of Consciousness and Their Relation to Authority*

My philosophical exploration of mystical experiences looks at three key questions. What are mystical states of consciousness? What kind of knowledge can be gained from subjective mystical experiences? What authority do mystical experiences have? This presentation analyzes part of William James' *The Varieties of Religious Experiences* – specifically where he discusses mystical states of consciousness. James analyzes a sample of mystical experiences for the general qualities and characteristics that are common. He draws practical conclusions from his analysis of mystical states of consciousness. I conclude by looking at contemporary implications of his analysis.

Kenny Anderson, Allison Carson, Terry Chavis, Jazmin Goodson, Joselyn Gorman, Katana Jenkins, Teona McCain, Brett Pardue, Elizabeth Smith, *Schoolhouse of Step*

The M. Hill Steppers is an organization bringing African-American cultural aspects to the campus and giving all students another way to express themselves and foster new relationships. The Schoolhouse of Step is our theme for the SLAM Arts Break, which will be introducing the art of stepping to all of the Mars Hill community. Stepping is a form of percussive dance in which the participant's entire body is used as an instrument to produce complex rhythms and sounds through a mixture of footsteps, spoken word, and handclaps. The tradition of African stepping is rooted within the competitive schoolyard song and dance rituals practiced by historically African-American fraternities and sororities, beginning in the mid-1900s. It takes weeks and weeks of determination and practice to put together an exciting, crowd pleasing show, and we will be sure to wow the crowd.

Andrew Greer, *Tribal Relations in Early 7th Century Medina: Mohammad and the Medina Charter*

The Medina Charter was drafted in 622 C.E by Mohammad of Mecca, the founder of Islam. Through the charter he was able to unite the many Medinan tribes of different religious backgrounds and political aims. The goal of the research was to find out how Mohammad was able to gain enough influence within the city to be able to draft such a charter and how the charter united the tribes. The reason why this topic is significant is because Medina is the founding community of Islam.

Student Liberal Arts Mosaic

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Tonya Jo Gruel-Wright, *Medial Malleolus Fracture and Peroneal Tendon Dislocation in a NCAA Division II Collegiate Female Soccer Player*

Lateral ankle sprains and avulsion fractures make up 29% of injuries in soccer. I will be reviewing the case of a soccer player who suffered an avulsion fracture of the medial malleolus and peroneal tendon dislocation. Beginning with the background of the injury, I will review the mechanism of injury, evaluation, and diagnosis of this injury. I will further discuss the treatment that was given to the athlete for the injury, how it was given, and why it was given. To conclude I will talk about the uniqueness of this injury and the current status of the injury.

Dana Holcombe, *"Honest – to – Goodness Work: Madison County & the New Deal"*

During the Great Depression many Madison County, North Carolina residents saw President Franklin Delano Roosevelt's New Deal programs as handouts. Strong mountain traditions of self-sufficiency prompted them to view "handout" charity with suspicion. While these feelings prevailed throughout Roosevelt's time in office, two programs offering government jobs found local acceptance. Because they provided "honest-to-goodness work," the Civilian Conservation Corps and the Works Progress Administration met with some acceptance among people who initially expressed suspicion and hostility toward the New Deal. Local oral histories and newspaper articles from the era reveal that these programs improved local infrastructure, laying the foundation for a resurgence of the tourist industry. Enhanced infrastructure and new school buildings also improved accessibility to educational opportunities. These two New Deal programs accomplished two things. They offered immediate assistance during the Great Depression and they left a lasting legacy in Madison County.

Heather Lynn Huckabee, *Sex Sells!*

Human trafficking has become a widespread issue in Asia. Instead of being significantly resolved, the problem has continued to increase over the past two decades. People who are victims of human trafficking are subject to several different types of exploitative labor. However, sex trafficking is by far the most severe type of labor that a female can fall prey to. Women and young girls who are a part of the sex industry make up the majority of the population of trafficking victims. Asian states are not making the effort that is needed to put a stop to sex trafficking. If appropriate measures are not taken, the problem will only increase. I will explain why current international agreements and legislation are not effective in Asia's struggle with sex trafficking. Furthermore, I will address reasons why reform is needed and should be considered.

Heather Lynn Huckabee, Shelby Johnson, Andrew Little, Victor Sloan, Nick Smith, Melissa Stuckie, Jessica Viscusi, Caitlin Whitt, *Live Storytelling as a Vehicle for Building Community and Diversity Appreciation*

In the spring 2013 semester, the PAGOS Diversity group studied the differences in the culture around us, on campus and in the community, in an attempt to map out the terrain of diversity. In our study of gender, race and religion, we uncovered that one of the key indicators of whether or not diversity is welcomed relies upon whether or not people have relationships with others who embody particular differences. Through personal anecdotes, we will showcase the diversity on campus and in the region through live storytelling. We intend to show that building relationships and identifying common human experiences is an effective way to overcome our differences and build and appreciation of diversity.

Joo Kyung Esther Kim, *The N:P Ratio; A Potential Indicator of The Source Of Fecal Contamination In A Water Body*

Microbial contamination of drinking water is a concern throughout the world. Testing water samples for every pathogen is expensive and time consuming. Therefore, a cheap, reliable and rapid method such as coliform test is preferred. Fecal coliform bacteria are microorganisms present where there has been sewage contamination from warm-blooded wild animals, domestic animals or humans. Coliforms do not cause disease, but their presence suggests that pathogens might be present in waters. Fecally contaminated water is unsuitable for consumption regardless of the source. However, the knowledge of the source of fecal contamination facilitates effective management of contamination to waters. Water samples were collected near forested, agricultural, and residential areas from Banjo Branch and Gabriel's Creek near Mars Hill, NC. Samples were analyzed for nitrates, phosphates, and fecal coliforms in order to test the hypothesis that the nitrate/phosphate ratio may be used to predict the fecal coliform source. Nitrate (N) originates primarily from fertilizer and manure. Phosphate (P) originates primarily from soil minerals, detergents and fertilizers. Upstream, where wild animals inhabit, we expected to have higher N:P ratio. Downstream near agricultural and residential areas we expected lower N:P ratio.

Joseph Lancaster, *Ethical Consideration of the Conscious Animal*

Animals are often claimed to be less than fully conscious beings. Whether from an argument of cognitive ability or rationality, animals are considered to be less conscious than humans. Yet as my research demonstrates, there are animals that exhibit strong evidence of being conscious, in that they are aware of their own existence and possess the ability to modify behavior based on the reflection of stimuli given from a surrounding environment. If animals are proven to be conscious beings, then we must take up ethical issues regarding their welfare and treatment, and may begin to shift animals towards a more human position in the ranking of conscious and non-conscious beings.

Regis Paidamoyo Mawire, *Stem Cell Therapy for Spinal Cord Injuries*

Spinal cord injuries are career ending and very harsh injuries for all individuals that suffer from them. Be it a car accident or sports injury, they leave individuals permanently paralyzed. Stem cell therapy is nothing new in the medical field but breakthroughs in replication of stem cells without embryonic killings has rekindled the possibility of stem cell therapy to treat for spinal cord injuries and many human diseases without any moral implications. A stem cell is a special type of cell in the body that doesn't specialize, hence its capabilities of replicating any other cell form in the body. With this kind of property, stem cells can be injected in the sites of spinal cord injuries and can bridge the gap between the two separated ends restoring motor function. This presentation focuses on how the use of stem cells could help facilitate the healing of spinal cord injuries.

Adam C. Mincey, *Cinnamon Oil: Nature's Answer to Antibiotic Resistant Bacteria*

Infections caused by antibacterial medication resistant strains of bacteria are becoming increasingly difficult to treat. Part of this problem lies in the lack of diversity in antibacterial pharmaceuticals. Many essential oils demonstrate antimicrobial properties with aromatic hydrocarbons as the active antimicrobial molecules. I hypothesized that because of the aromatic nature of the three active derivatives of Cinnamon oil (carvacrol, thymol, and eugenol) that cinnamon oil kills bacteria by inhibiting their cellular respiration. A Gilson Differential Respirometer was used to quantify the effects of cinnamon oil on the cellular respiration of a gram-positive (*Staphylococcus aureus*) and a gram-negative bacteria (*Escherichia coli*).

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Hillary Modlin, *Therapeutic Techniques for Treating Painful or Traumatic Memories: Pharmacology versus Depth Psychotherapies*

We cannot deny the existence of pain and suffering; they are inescapable features of the human experience. But what if we could prevent our minds from recalling such instances? Would erasing painful or traumatic memories be more useful than learning how to work through them? In an age captivated by medical interventions and “quick fixes,” this question is a relevant inquiry and vital task within the field of clinical psychology to determine appropriate directions for primary treatment options. My research examined the differences between pharmacology (drug therapy) and depth psychotherapies (person-centered talk therapies) as methods for addressing painful or traumatic memories. By critically analyzing the literature and providing research examples, I present some of the theoretical underpinnings and practical applications of both perspectives. In so doing, my aim is to demonstrate the value of using depth psychotherapies to work through unwanted memories rather than bypassing the therapeutic process through pharmacological means.

Kyle Moore, *A Search for p53 and PCNA Expression in Canine Epithelium Tumor Cells*

Each year cancer claims millions of lives of those unfortunate to have been diagnosed with malignant neoplasms. Cancer development can be caused by a variety of carcinogens that compromise the integrity of DNA. Modern cancer research involves identifying whether specific oncogenes and/or tumor suppressor genes have been mutated to give a personalized treatment to each individual cancer type. Immunohistochemistry is a technique used to detect the expression specific proteins in a tissue, which can then be visualized under the microscope. In this study two proteins, PCNA and p53 were selected as possible biomarkers in the prognosis of canine epithelium tumors. The immunohistochemistry procedure was optimized for PCNA and p53 in canine tumors to determine their efficacy as prognostic tools for cancer researchers.

Alyssa Morris, *Health Effects of a Raw Food Diet: Balancing Your Inner pH*

Recent interest in a “raw food” diet has been at an all-time high. The driving force of the raw food diet and being a “raw foodist” is the consumption of unprocessed, whole plant-based, nutritionally-dense organic, uncooked, and unprocessed foods. Some health benefits that are linked to a raw food diet include: weight-loss, sustained weight-loss, improved digestion, decrease of cardiovascular disease, and increased energy. Most of these changes in your body occur due to the increase of alkalinity in your body due to ingesting raw foods. Heating food above 118 degrees Fahrenheit causes chemical changes in food that create acidic toxins, including the carcinogens, mutagens and free-radicals associated with diseases like diabetes, arthritis, heart disease and cancer. My presentation will review the benefits and potential risks associated with converting to a completely raw food diet.

Melanie Grace Morton, Sarah Emily Richardson, Tyler Winkler, Alexis Miller, Justin Gaylard, Steven Green, Heather Bronson, Annie Elizabeth Tesh, Savannah Hayes,

For Your Entertainment: A Musical Theatre Extravaganza

Historically, songs in musical theatre were written not just to fit the musical, but also to be sold on the radio. Composers and lyricists, who worked in Tin Pan Alley, wrote songs they knew would make a pretty penny. This is very similar to modern musical theatre. In every good show there is at least one song that the audience can go away whistling. In our presentation, we will highlight many numbers from musicals that do just this by performing songs from hit Broadway musicals, cabaret pieces, and Disney productions. The most important factor in making a musical popular is its ability to relate themes to the audience. Our hope is to present these themes, while doing what we love best, entertaining. Amidst the fun of the show, tidbits of musical theatre history will be sprinkled on top, to make this delicious desert even tastier.

Brett Pardue, *A World of Music: Self-Directed Learning*

Though Mars Hill College provides students with the pre-professional skills necessary to enter graduate school, more competitive programs will seek out students who have supplemented their undergraduate degree with performance-related opportunities offered outside the college. After researching, applying for, and raising money for the Bel Canto Institute of Music this past summer, I realized how fundamental these extra-curricular opportunities are in preparing for graduate school. The 4-week intensive study of 17th and 18th century Italian Art-Songs and Arias in Florence, Italy, was not an inexpensive one, but by searching for scholarship opportunities and by having an enthusiasm for fundraising, I was afforded a significant opportunity to study one of the oldest techniques of singing with some of the most recognized coaches in the industry. My presentation will begin with strategies for identifying and funding these life-changing experiences and will conclude with a presentation of some of the music I explored while on my journey this past summer.

Chelsea Parker, “*Richmond’s Jim Crow and the Two Paths to Seek Equality, 1954-1968*”

The African American Civil Rights Movement of the twentieth century formed two divergent paths to seek equality: one was nonviolent and the other was militant. Activists’ efforts were not just in the Deep South, but took place across the nation. I have examined the experiences of two African Americans who both grew up in Richmond, Virginia, yet selected different paths in their fight for equality. This study demonstrates how age, gender, and education affected the choices these two activists made in the battle for civil rights in the 1950s and 1960s.

Michelle Payne, *Beautiful Souls, Warrior Hearts*

This presentation will explore the “beautiful soul” narrative and how it impacts the way people think of war. The idea that women are the reason and cause for conflict creates a challenging dynamic with regard to their impact on war. To further complicate this relationship, women have, throughout history, become more involved in the actual violent actions that take place during war. To this point I will examine the current ban on women in front-line combat and how policy is finally catching up with practice. Women have been militaristic for centuries and, as the front-line becomes more blurred by modern warfare, it is almost impossible to differentiate between front-line and other types of combat. Furthermore, I will discuss female suicide bombers, a growing trend throughout the past two decades and what motivates females to make this extreme political statement.

Ben Phillips, *Caliph ‘Umar: Justification of the Islamic Expansion*

‘Umar ibn al-Khattab was the second caliph in Islam and was part of the original followers of Islam who lived with Muhammad in the city of Medina; he was given the titles of Al Farooq, “The one who distinguishes between right and wrong,” and Amir al-Mu’manin, “the Commander of the Faithful.” He is considered by some Muslims as the second most important person to the faith after Muhammad. He was the Caliph during the Islamic expansion, which brought the Arabian peninsula, Egypt, and largely the Middle East under the control of the Muslim empire. The question is whether ‘Umar was justified in the Islamic ideals by the Qur’anic views of war and aggression, and from the Roman, and later Christian, ideology of Just War Theory for his expansion and the conflicts involved.

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Chris Platt, *The Death of Bacteria: Using Silver NHC Complexes to Kill the Intruders*

Silver has been known throughout the ages as a valuable resource. Since the middle ages it has been used for its medicinal properties, including antimicrobial. This knowledge mixed with a new type of molecule called an N-Heterocyclic Carbene or NHC for short has resulted in an explosion in this field of study. The combination of silver and NHCs has resulted in studies that have shown an increased antimicrobial activity using less material than the old method of using silver salts. My study uses a new approach of attaching NHCs to a tripodal ligand and then attaching silver to each of the NHCs to create a large complex bonded with three molecules of silver. The new compound, along with the silver NHC not bound to the ligand, is then tested against strains of bacteria to determine if the antimicrobial activity is increased. The pathway to getting this new compound is novel and the interests of the study are about increased silver antimicrobial activity using NHC as a delivery vector.

Aaron Frost Rapp, *How Does an Abstract Form of Mathematics Known as Knot Theory Have Applications in Biology and Chemistry?*

Knot Theory can be defined simply as the mathematical study of knots. This type of mathematics gained appeal when Sir William Thomson introduced his Vortex Atom theory in the late 1800s. Though his theory was the initial spark of studying knots, interest in this sub-domain of mathematics continued erratically until the 1970s where it began to grow rapidly. Though it is true, to an extent, that this form of mathematics is considered abstract, it goes unrealized how other domains, such as biology and chemistry, use principles and properties of Knot Theory to advance their understanding. In this research project, I identified several research studies that used Knot Theory to solve or help understand their identified problem. I also identified established principles or ideas within biology and chemistry that include Knot Theory ideas and principles.

Margaret Redford, *Horses, Robots, and Physical Therapists: Diverse Approaches to Rehabilitation for Cerebral Palsy*

Cerebral Palsy (CP) is a group of nonprogressive disorders that affect movement, posture, and development within approximately 800,000 children and adults in the United States. Generally this condition presents itself with motor, neurological, and physical abnormalities, making physical therapy a key aspect in these individual's lives. Since the nature of CP has direct involvement of movement, posture, and physical abnormalities, numerous approaches to physical therapy are used based on the severity of the disorder, age of the patient, and personal goals of the patient. Physical therapy for CP patients can take a traditional or innovative approach or a combination of the two. Extensive research has been conducted regarding new and innovative ways to approach and apply physical therapy for individuals with CP. These techniques include Hippotherapy, video games, robots, etc. This presentation will focus on the benefits and limitations associated with different approaches of rehabilitation techniques used for CP patients.

Sumner B. Rhodes, “...Never said a Mumblin’ Word”: *African American Music from Slavery—Biblical Roots, Political Meanings, and Social Implications*

Imagine that you are ripped from everything you have ever known by strangers who look very different from you. You are beaten, abused, chained, whipped, and sometimes even raped. You are stripped of your clothes and separated from your friends and family. Everything you ever hoped, dreamed or desired is taken from you in an instant. Just one blink of an eye and everything you have ever loved or treasured is lost. This is the story of so many Africans brought to early America. Despite all this, there was one thing that their oppressors could not take away and that was their spirit and will to survive and break free. This presentation is an analysis of how African American enslaved peoples, with the Bible as their source, used music as a way of protesting against their oppressors, and as a way of expressing religious and political hopes for freedom.

Anna Richt, *Get Your Head in the Game: Long-Term Neurodegenerative Changes in Athletes Suffering From Multiple Concussions*

In recent years there has been increased attention placed on neurological impairments associated with sports-related traumatic brain injury, particularly concussions. Most symptoms resulting from concussions are temporary; however, a minority of athletes develop post-concussion syndrome that can persist throughout the remainder of one's life. Research has shown that multiple concussions pose increased risk for many debilitating conditions. While these disorders are rare, they can severely alter the patient's quality of life. The negative ramifications and mortality associated with traumatic brain injury has been branded a "silent epidemic". This project raises awareness of long-term, post-concussion effects in hopes to help prevent injuries and treat those who sustain mild traumatic brain injury.

Corrine Roberts, *"The Difficulty with Defining a People: Exploring "Irishness" Through the Life and Lens of James Joyce"*

In a world where borders have been blurred by the simplicity of travel, the question of national identity has become topical. However, "Who am I?" and "Where do I belong?" are questions that are certainly not confined to the present. This presentation explores James Joyce's complicated relationship with his Irish heritage and how he depicts his homeland through writing. In particular, it examines *A Portrait of the Artist as a Young Man* as well as selections from his collection of short stories, *Dubliners*. Each piece is filtered through the lenses of psychoanalytic and postcolonial theory (this involves particular attention to the workings of the human mind, especially the expression of the unconscious, as well as the struggle between the colonized and colonial powers within the literature). Language, duty to culture, and paralysis were the three themes focused on within the texts. They showcase the tension Joyce felt between his cultural history and his call as a writer and how this all culminated to create his identity.

Corrine Roberts, *Cloaking Classical Literature*

Today the assumption held by many is that if you do not like English classes by the time you get to college, you never will. The dense language of many classic prose and poetry pieces is considered too much to wade through and generally not worth the time and effort. Unfortunately, negative experiences from a student's past can forever impact their perception of a subject as a whole. This presentation offers a new way to teach classic literary pieces to students in the hopes that it will generate interest and get them to look at literature in a new way. This "cloaking" method is content before form, action before style approach that aims to reach students who have yet to find a love of literature.

Rachael Rogers, *"We're All Peddlers of the Apocalypse": Chernobyl and its Imprint on the Ukrainian People"*

When the nuclear reactor at Chernobyl exploded on April 26, 1986, the devastation brought upon Ukraine was catastrophic. The affects immediately following the disaster and the affects that can be seen today are staggering. More than 160,000 citizens were displaced from their homes. The radiation cloud emitted from the reactor contaminated 100,000 square miles, an area the size of Colorado. Hundreds of thousands of civilians were brought in to help clean up the nuclear disaster. We cannot be sure how many of those people died from cleaning and how many people are living now with various forms of cancer today. The Soviet Union lied about the number of people who died and unfortunately we will never be able to know the true amount of people affected.

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Miranda Schmidt, *Alligator mississippiensis and the Effects of Capture on Sex and Stress Hormones.*

Stress has been shown to have negative effects on reproductive activity in a variety of species. Elevated adrenal steroids associated with stress are thought to suppress the pituitary stimulation of the gonads along with the production of sex steroids. During this study we conducted an experiment to examine the effects of acute (short-term) stress on adrenal steroids (corticosterone) and the gonadal steroids (testosterone). We measured plasma corticosterone and testosterone in American alligators immediately upon captures and then 15-60 minutes later, just prior to the release. An enzyme immunoassay (EIA) was used to analyze the plasma concentrations. Our prediction was that corticosterone concentrations would increase during the capture period while testosterone concentrations would decrease.

Octavia Samantha Stancil, *Women and Sexual Inequality in the Code of Hammurabi*

The rights of women are a highly controversial topic and have been for centuries. Even ancient civilizations weighed in on what rights should be allotted to women. The code of Hammurabi, written in 1780 B.C.E. by King Hammurabi of Babylon, is really no different. The Hammurabi code is considered to be one of the first written code of laws in ancient history. The question that I am exploring is “ what is the code of Hammurabi state about the rights and the role of women in ancient Babylonian society?” this question is relevant to today’s modern society because the Code itself is constantly reference and still has a major presence in developing countries. This presentation will explore the previous Sumerian society generation, the code of Hammurabi itself, and examining pieces of the modern feminist movement.

Becca Symons, *How Temperature Affects Reproduction Rate in Asian Clams (Corbicula fluminea)*

Asian clams (*Corbicula fluminea*) are an invasive species to North Carolina. This clam species is a self-fertilizing hermaphrodite that can thrive in a range of habitats, these two conditions allow for the species’ vast distribution. This study was conducted to determine if temperature has an effect on the rate of reproduction in Asian clams. There were two sets of three 5 gallon aquariums which were set to varied temperatures (13°, 17°,25°). All aquariums had an equal biomass of individuals. Weekly counts of offspring were taken for a three week trial period to determine if temperature is a factor in reproductive rate.

Katie Terry, *Appalachia 2.0: Using Social Media to Virtually Experience a Unique Culture*

Through the creative use of social media, this project will allow others from anywhere in the world to virtually experience the unique Appalachian culture. The purpose of this study was to chronicle defining elements of the Appalachian region. Appalachia 2.0 limited its studies to two main mountain counties; Madison and Yancey. The target goal was to interview 15-25 third generation residents with a story to tell about their life in the Appalachians. The long-term goal would ideally encourage collaboration across disciplines, inviting writers from all colleges belonging to the Appalachian College Association to contribute to the social media platforms that were established; including Facebook, YouTube, and the blog, Appalachia 2.0.

Zach Tomkinson, *Concussion in Youth Sports: A Head Game*

Concussion in youth sport is a topic that has been exponentially increasing within the sport and medical worlds. With the growing awareness on the subject, some are questioning the thought of youth competing in contact sport at to early of an age. Early introduction to contact sport increases the overall injury exposure rate and that sustaining a concussion may have effects on athletes later in life. Some researchers believe that the removal of physical contact in youth sports may reduce traumatic head injuries, but in reality eliminating physical contact within youth sport may not be the best preventative measure. Because physical contact is a part of sport, reduction of contact exposures should not be the only means explored in prevention of traumatic head injuries within youth athletics.

Sarah E. Wilson, *The World at Home: China As Seen by the American Public Through National Geographic Magazine*.

Since its creation in 1888, The National Geographic Society has brought the world into the living rooms of Americans through its magazine. Within its first decade, *National Geographic* strayed away from its original scholarly roots and began catering to a more diverse audience. China was and is still one of the most frequently covered subjects in the magazine. The magazine covered the end of the Qing dynasty, civil wars, puppet governments and the nation's communist rebirth. This presentation studies the magazine's coverage of these events, not as the presentation of historical fact but rather as an apt study of the magazine's American audience and how they likely viewed China based on what they read and saw within *National Geographic*.

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The SLAM Committee

Mrs. Joy Clifton, Division of Mathematics and Natural Sciences, Committee Chair

Ms. Dani Franco, Student Representative

Dr. Andrea Rockel, Division of Mathematics and Natural Sciences

Dr. Greg Clemons, Division of Humanities and Social Sciences

Mr. Michael Landis, Director of Student Involvement and Leadership

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LOGISTICS for
SLAM

Please Read Carefully!

*Remove your SLAM Passport from the program.
Add your name and signature to the back of the Passport.
Your Passport is your personal ticket into SLAM activities.
It will be stamped at the door of each session you attend.*

DO NOT LOSE IT!

Many professors will ask to see your Passport as proof of attendance.

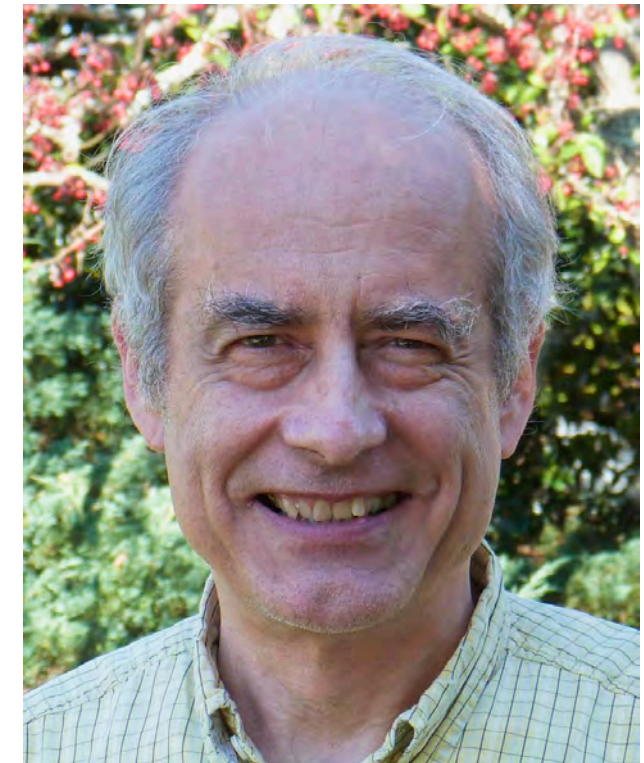
- During Oral Presentations (Sessions I, II, and V), thematically arranged groups of presentations will be happening **SIMULTANEOUSLY** in **MULTIPLE PLACES** on campus. Check your program carefully and decide which you want to attend. You will only be able to attend one group of presentations in each session. Please remain in that session for all presentations.
- The Arts Break Performances (Session IV) are also happening simultaneously in **MULTIPLE PLACES** on campus. The performances begin at 1:30 and last for twenty minutes. They will be repeated at 2:00 so you can attend more than one.
- To be eligible for one of the Fabulous SLAM Door Prizes, you must be present at the Closing Celebration at 3:45 pm in Moore Auditorium and your passport must have four stamps that show you have attended:
 - ✓ Session III (Plenary—Michael Ruiz) AND
 - ✓ at least 3 entire sessions from the other four options (Sessions I, II, IV, V)
- **What next?** Select one of the exciting presentation groups from Session I. Hurry on over to its location. Some may be Standing Room Only, so get there quick to get a seat!

HAVE FUN and GET SLAMMED!

The Plenary Speaker Michael Ruiz

Our plenary speaker this year is Michael J. Ruiz, professor of physics at UNC Asheville. Professor Ruiz holds a doctorate in theoretical physics from the University of Maryland. Professor Ruiz is also a pianist and composer who has written three piano concertos performed by the Winston-Salem Symphony. His approaches to learning bridge the gap between the sciences and the arts. Professor Ruiz is the first faculty member at UNC Asheville to receive all three of his institution's major teaching awards.

His website is www.mjtruiz.com.



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