

*Fourth Annual*



April 9, 2015



## From the Provost, Lipscomb University

A university can be defined in many ways. One of the most significant and true, however, is the measure of engagement reflected in the quality of student research and creative projects produced by its students. I am most proud of the fact that the Student Scholars Symposium is now a tradition at Lipscomb; but it is not only a tradition but a growing one. This can be seen by looking over the current program. The papers presented increase both in number and quality each year, as does the range of the topics and ideas discussed. I am also delighted to see the diversity of talent and voices reflected in the growing number of presentations in the creative arts. This speaks to the vitality of our academic programming. I appreciate the work of the faculty committee and the leadership of Dean Norma Burgess and Dr. Florah Mhlanga in putting together such a vibrant and inviting program.

*Dr. Craig Bledsoe*

## From the Dean, College of Liberal Arts & Sciences

Greetings and welcome to the fourth Student Research Symposium. The creation and advancement of knowledge in academic fields is often the greatest excitement that we have as scholars and teachers. Today, we join together to hear and learn about new and continuing research by students and faculty. I believe you will be mightily impressed as we showcase their work, taking excellence to the next level. We gratefully acknowledge the Office of the Provost, Honors College and SALT for their generous support. Appreciation also for our faculty committee for a dynamic program; my sincere welcome to you.

*Dr. Norma Burgess*

**Opening Session:** *Ezell 301*

**Chair:** Dr. Florah N. Mhlanga, Associate Dean of the College of Liberal Arts and Sciences

- 7:30 a.m.-8:30 a.m.      **Registration and Coffee**
- 8:30 a.m.-8:45 a.m.      **Introduction**  
Dr. Norma Burgess, Dean of the College of Liberal Arts and Sciences
- 8:45 a.m.-9:00 a.m.      **Opening Remarks**  
Dr. Craig Bledsoe, Provost

## 9:10-10:55 a.m. • Concurrent Sessions Undergraduate Students Presentations

**Paper Presentations IA:** *Ezell 301*

**Chair:** Phyllis Hildreth, Associate Professor of Conflict Management

- 9:10 a.m.      **Service and Learning: English Tutoring Handbook**  
Allie Sockwell and Christin Shatzer, SALT
- 9:25 a.m.      **On Covering the Head While Praying or Prophecy in the Public Assembly**  
Michaela Genz and Mike Williams, Bible
- 9:40 a.m.      **Survey of Student Reactions to Mayoral Candidates' Statements**  
Daniel Godfrey and Marc Schwerdt, History Politics and Philosophy
- 9:55 a.m.      **Why Disney Ruined My Childhood**  
Kenleigh Howard and Richard Goode, History Politics and Philosophy
- 10:10 a.m.      **Reviving Ideals: Zora Neale Hurston's View of Womanhood Based on Proverbs 31**  
Jennifer Greene and Sonya Green, English & Modern Languages
- 10:25 a.m.      **A Divided Body: Church Elitism in 1 Corinthians 11:17-34**  
Christiana Muir and Mike Williams, Bible

**Paper Presentations IB: *Ezell 363***

**Chair: Dr. Hope Nordstrom, Assistant Professor of Education**

- 9:10 a.m. **Hostelity: A Creative Writing Reading**  
Megan Peters and Sonya Green, English & Modern Languages
- 9:25 a.m. **Like Oklahoma: Male Authority and Nature in Fuller's Autobiography and My Poetry**  
Kimberly Kolpek and Dana Carpenter, English & Modern Languages
- 9:40 a.m. **Stolen**  
Amber Thompson and Dana Carpenter, English & Modern Languages
- 9:55 a.m. **Depravation Theater**  
Jennifer N. Sellers and Dana Carpenter, English & Modern Languages
- 10:10 a.m. **Instilling a Love for Reading: Young Adult Literature in Classrooms**  
Rachel Devoe and Stacia Watkins, English & Modern Languages
- 10:25 a.m. **Choices that Matter: Incorporating Young Adult Literature in the Classroom**  
Sarah Robertson and Stacia Watkins, English & Modern Languages

**Paper Presentations IC: *Ezell 147***

**Chair: Dr. Jimmy McCollum, Associate Professor of Communication and Journalism**

- 9:10 a.m. **Nitrate and Phosphate Pollution Influencing a Nuisance Algal Bloom at Garrison Creek**  
Eric Hillstrom and Emily Stutzman-Jones, Institute for Sustainable Practice
- 9:25 a.m. **Food Loss and Waste by Global Region: Analysis and Proposed Reduction Strategies**  
Emily Henry, and Paul Prill, Communication and Journalism
- 9:40 a.m. **Chattanooga Area Food Bank Public Relations Plan**  
Alex Walker and Aerial Ellis, Communications and Journalism

- 9:55 a.m. **The Use of Hippotherapy and Therapeutic Riding to Improve Physical and Emotional Wellness in Special Needs Children.**  
Samantha Bell and John Conger, Family Science

- 10:10 a.m. **Home Matters Nashville - Public Relations Campaign**  
Sara-Jane Kerstetter, Lauren Temple, Nicole Anderson and Aerial Ellis, Communication and Journalism

- 10:25 a.m. **The International Bluegrass Music Association and Sustainability: The Birth of a Green Initiative in a Blue Community**  
Andy Rigney and Emily Stutzman-Jones, Institute for Sustainable Practice

**10:55-11:55 a.m.**

**Lunch and Keynote: Ezell 301**

**Chair: Dr. Jan Harris, Assistant Professor of English**

**Keynote Presentation: The Lazarus Disease: A Career in HIV**

Dr. Jean Anderson, Professor in the Department of Gynecology and Obstetrics and Medicine and Director of the Division of Gynecologic Specialties, The Johns Hopkins School of Medicine

**12:05-1:35 p.m.**

**Concurrent Sessions**

**Graduate Students Presentations**

**Paper Presentations IIA: *Ezell 147***

**Chair: Dr. Ruth Henry; Professor and Vice Chair of Nutrition and Kinesiology**

- 12:05 p.m. **Streetwise Educators: Social and Emotional Learning in Pre-Service Teacher Candidates**  
Will Penner, Olivia Travis, Bob Masoner and Keith Nikolaus, Education

- 12:20 p.m. **A Post-Secondary Matriculation Case Study of Two Rural Tennessee Counties**  
Trish Holliday, Burton William, Jason Rushing, and Trace Hebert, Education
- 12:35 p.m. **Goal Setting With Contingency in a Child with Autism**  
Megaera Rye and Amber Music, Education
- 12:50 p.m. **Literacy Interventions for 9th Graders**  
Ginger Hollingsworth, Frank Tittle and Trace Hebert, Education
- 1:05 p.m. **Genesis as a Template for John's Gospel**  
Steven Grant and George Goldman, Bible and Ministry

**Paper Presentations IIB: *Ezell 301***

**Chair: Dr. Beth Conway, Associate Professor of Biology**

- 12:05 p.m. **Decision Making in the Business Strategy Game**  
Christopher Avrit and Chuck Capps, Business
- 12:20 p.m. **Immunoproteasome Activation Mediated via JAK2 Signaling Pathway in the Presence of IFN- $\gamma$**   
Kristin Ali Keith and Amanda D. Williams, Biology
- 12:35 p.m. **Applying Zero Management Techniques to Achieve Desired Veteran Behavior**  
Mija Nichols and Dodd Galbreath, Institute for Sustainable Practice
- 12:50 p.m. **Left Behind: A Farmer's Place Capitalism**  
John Plunkett, David Smith and Emily Stutzman-Jones, Institute for Sustainable Practice
- 1:05 p.m. **Where Have I Come From, and Where am I Going?: Conceptions of Ghanaian Children Formerly in Forced Labor**  
Brooke McAllister and Chris Gonzalez, Psychology & Counseling

**Undergraduate Students Presentations**

**Paper Presentations IIC: *Ezell 363***

**Chair: Dr. Matt Hearn, Professor of English**

- 12:05 p.m. **Memory and Its Role in Deciphering Truth in Tim O'Brien's "The Things They Carried"**  
Anna Johnson and Jan Harris, English & Modern Languages
- 12:20 p.m. **You Are What You Speak**  
Hailey Bryant and Stacia Watkins, English & Modern Languages
- 12:35 p.m. **Puritanism Alive and Well in the 21st Century: A Study of Fall River: An Authentic Narrative**  
Geneva Waynick and Brandi Kellett, English & Modern Languages
- 12:50 p.m. **When Pressed We Say She's Elegant**  
Alycia Gilbert and Kimberly Reed, English & Modern Languages
- 1:05 p.m. **Ethics, Narrativity and Success: Ian McEwan's "Atonement"**  
Macon Overcast and Kimberly Reed, English & Modern Languages

**Performances I: *Shamblin Theatre***

**Chair: Dr. Carrie Abood, Assistant Professor of Education**

- 12:05 p.m. **Signal Mountain**  
Craig Daugherty and Jan Harris, English & Modern Languages
- 12:20 p.m. **Harbinger**  
Zach Johnston and Jan Harris, English & Modern Languages
- 12:35 p.m. **Arboretum**  
Ellen McGuirk and Jan Harris, English
- 12:50 p.m. **Frostbitten: A Collection of Poetry**  
Carolanne Deaton and Jan Harris, English & Modern Languages
- 1:05 p.m. **The Window Seat.**  
Samantha Horne and Stacia Watkins, English & Modern Languages
- 1:20 p.m. **Susie, Baby**  
Lindsey Brake and Stacia Watkins, English & Modern Languages

1:30-2:45 p.m.

Poster and Exhibit Session: Ezell Lobby

**Graduate Students Posters**

**Chair: Dr. Shanna Ray: Associate Professor and Chair of Psychology**

1. **Synthesis of a 2-Methyl Meperidine Analog**  
Emily Holder and Susan L. Mercer, Pharmaceutical Sciences
2. **Fluorescence-Based Oligonucleotide DNA Cleavage System for Topoisomerase II**  
Malissa Sansom and Joe Deweese, Pharmaceutical Sciences
3. **Role of Cytochrome P450 3A5 in Lapatinib Metabolism and Bioactivation**  
Joanna K. Weiler and Klarissa D. Hardy, Pharmaceutical Sciences
4. **Metabolism and Bioactivation of Sunitinib In Vitro**  
Bourgeois and Klarissa D. Hardy, Pharmaceutical Sciences
5. **Women in Science: Benefits of Student Research in the Pharmaceutical Sciences**  
Rebecca N. Clark and Susan L. Mercer, Pharmaceutical Sciences
6. **Current Investigation of Etoposide Structure Activity Relationships**  
James Pokorny and Susan L. Mercer, Pharmaceutical Sciences
7. **Yogurt Supplementation for Lactation**  
Laura Schmutzer, Autumn Marshall and Amanda D. Williams, Biology and Nutrition
8. **Smart Lighting = Smart Money for Lipscomb University**  
Kelsey Davis, John Plunkett and Emily Stutzman-Jones, Institute for Sustainable Practice

**Undergraduate Students Posters**

**Group I**

**Chair: Dr. Jon Lowrance; Professor of Biology**

9. **New Methods for Acetamidomalonic Condensation Using a Microwave Reactor**  
Sara Brady, Christopher Coca, J. Ronald Boone and, Kent Clinger, Chemistry and Biochemistry
10. **Fluorescence of the Imines and Amines of Pyridoxal 5'-Phosphate with Amino Acids**  
Margaret Veers, Kevin Lavender, Annecie Benatrahina and Kent Clinger, Chemistry and Biochemistry
11. **Determining the Potential Role of NF- $\kappa$  B in Immunoproteasome Subunit Expression Induced by TNF- $\alpha$**   
V. Douglas Landers and Amanda D. Williams, Biology
12. **Immunoproteasome Subunit Activation by IFN- $\gamma$**   
Mark Mitchell and Amanda D. Williams, Biology
13. **Investigating the Role of Glutamate in Endothelial Cell Activation**  
Beshoy Fahmy and Beth Conway, Biology
14. **Epigenetic Change by CpG Island Methylation in the CD10 Promoter Region Contributes to the Invasive Nature of Breast Cancer Cells**  
Caitlin Couch, Brandon Baxter, Heath Austin and Beth Conway, Biology
15. **Pattern of Tdp2 and Top2b in Danio rerio**  
Kevin Loftis and Bonny Millimaki, Biology

**Group II**

**Chair: Dr. Kent Gallaher, Professor and Chair of Biology**

16. **Determining the Genetic Population Structure of Feral Pigs in Tennessee Using Microsatellites**  
Anthony Tata, Allison Griffin, John Lewis and Mary Sledge, Biology
17. **Investigating Endothelial Cell Activation and Angiogenesis by Glutamate Carboxypeptidase II Derived Peptides**  
Spencer Richardson and Beth Conway, Biology

18. **Impact of Thiosemicarbazones on the Activity of Topoisomerase II $\alpha$**   
Tom Wilson and Joe Deweese, Pharmaceutical Sciences
19. **Impact of Etoposide Quinone on DNA Binding and Ligation by Topoisomerase II $\alpha$**   
McKenzie King, Susan L. Mercer and Joe Deweese, Pharmaceutical Sciences
20. **How Do Farmer's Markets Affect Communities in the U.S.?**  
Amanda Myers and Emily Stutzman-Jones, Institute for Sustainable Practice
21. **Catcher's Release Point**  
Ryan Curry, Rachel Hightower and Gary Hall, Mathematics
22. **Solar Roadways**  
Kenneth Wilson, Jesse Travis and Gary Hall, Mathematics

### **Group III**

**Chair: Dodd Galbreath, Assistant Professor of Sustainability**

23. **The Sustainable Livelihoods Framework and Agroforestry**  
Amber Fuqua and Emily Stutzman-Jones, Institute for Sustainable Practice
24. **Renewable Energy: Is it as Efficient as Fossil Fuels?**  
Jacob Sheffield and Emily Stutzman-Jones, Institute for Sustainable Practice
25. **Onsite Grey Water Recycling: Are Water Quality Standards Being Met?**  
Jon Berry and Emily Stutzman-Jones, Institute for Sustainable Practice
26. **Exploring the Potential of Seaweed as Sustainable Biofuels**  
Brooke Barnes and Emily Stutzman-Jones, Institute for Sustainable Practice
27. **The End Of The Dead Zone**  
Josiah Lockard and Emily Stutzman -Jones, Institute for Sustainable Practice
28. **Pollution and Coral Reefs**  
Micalah Boddy and Emily Stutzman- Jones, Institute for Sustainable Practice
29. **The Effects of Grey Wolf Introduction in Yellowstone National Park**  
Graham Montgomery and Emily Stutzman-Jones, Institute for Sustainable Practice

### **Group IV**

**Chair: Dr. Eddy Borera, Assistant Professor of Computer Science**

30. **Suicide in Society**  
Makaila Offutt and Stacia Watkins, English & Modern Languages
31. **Cost Effectiveness of Trash Bag Brands**  
Ethan Gregory, Lynley Ratliff and Gary Hall, Mathematics
32. **Lipscomb Parking Garage**  
Andrew Bellows, Eric Gray and Gary Hall, Mathematics
33. **Pulse: Enabling Socially Responsible Software Exemplars**  
Samuel Owoyemi, Brianna Choy, Josh Fulton, Destiny Mhishi, Logan Tidwell and Steve Nordstrom, Computer Science
34. **Alden Line Bisection Test**  
Alexxa Bessey, Renae Tjelta, Alex Patterson and Dale Alden, Psychology
35. **Through the Distractions (An Exhibit)**  
Anna Lail and Earl Lavender, Bible

### **Group V**

**Chair: Dr. Joe Deweese, Associate Professor of Pharmaceutical Sciences**

36. **Determination of pKa, log P, and Solubility of Catechins**  
Angela Pham and Matthew Vergne, Pharmaceutical Sciences
37. **Nashville Flea Market Community Outreach**  
Richard Hunnicutt, Corina Picchiottino and Bob Spencer, Nursing
38. **Development of Novel T-Type Calcium Channel Inhibitors for the Treatment of Parkinson' Diseases**  
Mark Naguib, William Hedges and Nathan Daniels, Pharmaceutical Sciences
39. **An Analysis of Stoves in Third World Countries**  
Samuel B Webb and Emily Stutzman-Jones, Institute for Sustainable Practice
40. **Species Distribution and Diversity of Bird Populations in Tennessee**  
Andriah Friend, Jill Weller and John Lewis, Biology
41. **Solar Panels are Beneficial for Residential Homes**  
Steven Heide and Emily Stutzman-Jones, Institute for Sustainable Practice

**2:45-4:30 p.m. • Concurrent Sessions  
Undergraduate Students Presentations**

**Paper Presentations III A: *Ezell 301***

**Chair: Dr. Susan Mercer, Associate Professor of Pharmaceutical Sciences**

- 2:45 p.m. **Inhibition of Topoisomerase2 with HU-331 Results in Axonal Pathfinding Defects in *Danio rerio***  
Kadilee Adams and Bonny Millimaki, Biology
- 3:00 p.m. **Evidence of Intuition**  
Lauren Ford, Will Osburn and Ruth Henry, Kinesiology
- 3:15 p.m. **Intuitive Eating in Male and Female Athletes**  
Morgan Bucher, Kaitlyn Llewellyn and Ruth Henry, Kinesiology
- 3:30 p.m. **Developing a Rapid and Robust Analytical Method for Green Tea Catechins**  
Lincoln Shade, Jessica Murray and Matthew Vergne,  
Pharmaceutical Sciences
- 3:45 p.m. **Harlaxton Civil Engineering Project**  
Daniel Jordan, Michaela Kirk and Chris Gwaltney, Engineering

**Paper Presentations III B: *Ezell 241***

**Chair: Dr. Chuck Capps, Professor of Business**

- 2:45 p.m. **Interracial Marriage through the Lens of Dorothy West's "The Wedding"**  
Allie Sockwell and Jan Harris, English & Modern Languages
- 3:00 p.m. **Tristan and Isolde: Transforming Courtly Love**  
Brooke Foster and Jan Harris, English & Modern Languages
- 3:15 p.m. **Glass Family Philosophy: Spiritual Crisis and Epiphany in Salinger's *Franny and Zooey***  
Megan Roberts and Jan Harris, English and Modern Language
- 3:30 p.m. **Frankenstein as a Response to Wollstonecraft's Feminist Theory**  
Ellie Clayton and Brandi Kellett, English & Modern Languages

- 3:45 p.m. **Literacy and The Giver: How Young Adult Literature can Attract and Teach Emerging Readers**  
Jordan Taylor and Stacia Watkins, English & Modern Languages

**Paper Presentations III C: *Ezell 147***

**Chair: Dr. Mike Williams, Professor of Bible**

- 2:45 p.m. **Wait, What's Wakanda: A Post-Colonial Reading of Marvel's "Black Panther"**  
Megan Peters and Sonya Green, English & Modern Languages
- 3:00 p.m. **Alam's Melody**  
Harry Loyd and Stacia Watkins, English & Modern Languages
- 3:15 p.m. **Thirty-seven Weeks Between Heaven and Earth**  
Shelby Smith and Stacia Watkins, English & Modern Languages
- 3:30 p.m. **A Bee and a Bloom: Sexuality and Satisfaction as Adventure in *Their Eyes Were Watching God***  
Ellen Findley and Sonya Green, English & Modern Languages
- 3:45 p.m. **Living in Diaspora: Seeking Self-Possession in the New World**  
Jillianne Jerkins and Brandi Kellett, English & Modern Languages
- 4:00 p.m. **Of All the Parties in All the Suburbs**  
Melissa Pinhal and Dana Carpenter, English & Modern Languages

**Performances II: *Collins Alumni Auditorium***

**Chair: Dr. Paul Prill, Professor of Communication**

- 2:45 p.m. **In Saturday Yards**  
Zander Faidley and Sally Reid, Music
- 3:05 p.m. **The Transformation of the Solo Violin Sonata: from Bach to Ysaye**  
Grace Kimbrough and Sally Reid, Music
- 3:25 p.m. **3/4's Watermelon**  
Emma Peterson and Jan Harris, English & Modern Languages
- 3:40 p.m. **Color Poetry**  
Samuel Kurcab and Sonya Green, English & Modern Languages

- 3:55 p.m. **Ballerina Tragedy**  
Whitney North and Dana Carpenter, English & Modern Languages
- 4:10 p.m. **Sunday Morning: The Process**  
Joseph Sanderson and Jeffrey Barrie, Communication and Journalism
- 4:25 p.m. **Birth of an Arrangement**  
Jordan Smith, Ethan Bennett and Gary Wilson, Music

**4:45-5:30 p.m.**  
**Break**

**5:30-7:00 p.m.**  
**Dinner and Awards: Ezell 301**

**Chair: Dr. Caleb Clanton, Associate Professor of Philosophy**

**Presentation of Awards and Closing Remarks**

Dr. Randy Bouldin, Vice Provost for Academic Affairs and Graduate Studies

**Acknowledgements**

**Financial Support provided by:**

The Provost's Office  
College of Liberal Arts and Sciences  
SALT Program  
Honors College

**Organizing Committee**

Dr. Florah Mhlanga (Chair)  
Dr. Shanna Ray  
Dr. Beth Conway  
Dr. Carrie Abood  
Dr. Jan Harris  
Dr. Susan Mercer  
Dr. Caleb Clanton  
Dr. Mike Williams  
Dr. Chuck Capps  
Dr. Eddy Borera  
Dr. John Smith

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Student Presenters

Symposium Sessions Chairs and Judges

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