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 Prophesying 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. Hostility: 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

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

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

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
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 Acetamidomalonate 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-κ B in Immunoproteasome Subunit Expression Induced by TNF-α
    V. Douglas Landers and Amanda D. Williams, Biology

12. Immunoproteasome Subunit Activation by IFN-γ
    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

    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 IIα  
   Tom Wilson and Joe Deweese, Pharmaceutical Sciences

19. Impact of Etoposide Quinone on DNA Binding and Ligation by Topoisomerase IIα  
   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

   Jacob Sheffield and Emily Stutzman-Jones, Institute for Sustainable Practice

   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
### Paper Presentations III A: Ezell 301
**Chair: Dr. Susan Mercer, Associate Professor of Pharmaceutical Sciences**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>2:45 p.m.</td>
<td>Inhibition of Topoisomerase2 with HU-331 Results in Axonal Pathfinding Defects in Danio rerio</td>
<td>Kadilee Adams and Bonny Millimaki, Biology</td>
</tr>
<tr>
<td>3:00 p.m.</td>
<td>Evidence of Intuition</td>
<td>Lauren Ford, Will Osburn and Ruth Henry, Kinesiology</td>
</tr>
<tr>
<td>3:15 p.m.</td>
<td>Intuitive Eating in Male and Female Athletes</td>
<td>Morgan Bucher, Kaitlyn Llewellyn and Ruth Henry, Kinesiology</td>
</tr>
<tr>
<td>3:30 p.m.</td>
<td>Developing a Rapid and Robust Analytical Method for Green Tea Catechins</td>
<td>Lincoln Shade, Jessica Murray and Matthew Vergne, Pharmaceutical Sciences</td>
</tr>
<tr>
<td>3:45 p.m.</td>
<td>Harlaxton Civil Engineering Project</td>
<td>Daniel Jordan, Michaela Kirk and Chris Gwaltney, Engineering</td>
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### Paper Presentations III B: Ezell 241
**Chair: Dr. Chuck Capps, Professor of Business**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
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<tbody>
<tr>
<td>2:45 p.m.</td>
<td>Interracial Marriage through the Lens of Dorothy West’s “The Wedding”</td>
<td>Allie Sockwell and Jan Harris, English &amp; Modern Languages</td>
</tr>
<tr>
<td>3:00 p.m.</td>
<td>Tristan and Isolde: Transforming Courtly Love</td>
<td>Brooke Foster and Jan Harris, English &amp; Modern Languages</td>
</tr>
<tr>
<td>3:15 p.m.</td>
<td>Glass Family Philosophy: Spiritual Crisis and Epiphany in Salinger’s Franny and Zooey</td>
<td>Megan Roberts and Jan Harris, English and Modern Language</td>
</tr>
<tr>
<td>3:30 p.m.</td>
<td>Frankenstein as a Response to Wollstonecraft’s Feminist Theory</td>
<td>Ellie Clayton and Brandi Kellett, English &amp; Modern Languages</td>
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### Paper Presentations III C: Ezell 147
**Chair: Dr. Mike Williams, Professor of Bible**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>2:45 p.m.</td>
<td>Wait, What’s Wakanda: A Post-Colonial Reading of Marvel’s “Black Panther”</td>
<td>Megan Peters and Sonya Green, English &amp; Modern Languages</td>
</tr>
<tr>
<td>3:00 p.m.</td>
<td>Alam’s Melody</td>
<td>Harry Loyd and Stacia Watkins, English &amp; Modern Languages</td>
</tr>
<tr>
<td>3:15 p.m.</td>
<td>Thirty-seven Weeks Between Heaven and Earth</td>
<td>Shelby Smith and Stacia Watkins, English &amp; Modern Languages</td>
</tr>
<tr>
<td>3:30 p.m.</td>
<td>A Bee and a Bloom: Sexuality and Satisfaction as Adventure in Their Eyes Were Watching God</td>
<td>Ellen Findley and Sonya Green, English &amp; Modern Languages</td>
</tr>
<tr>
<td>3:45 p.m.</td>
<td>Living in Diaspora: Seeking Self-Possession in the New World</td>
<td>Jillianne Jerkins and Brandi Kellett, English &amp; Modern Languages</td>
</tr>
<tr>
<td>4:00 p.m.</td>
<td>Of All the Parties in All the Suburbs</td>
<td>Melissa Pinhal and Dana Carpenter, English &amp; Modern Languages</td>
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### Performances II: Collins Alumni Auditorium
**Chair: Dr. Paul Prill, Professor of Communication**

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>2:45 p.m.</td>
<td>In Saturday Yards</td>
<td>Zander Faidley and Sally Reid, Music</td>
</tr>
<tr>
<td>3:05 p.m.</td>
<td>The Transformation of the Solo Violin Sonata: from Bach to Ysaye</td>
<td>Grace Kimbrough and Sally Reid, Music</td>
</tr>
<tr>
<td>3:25 p.m.</td>
<td>3/4’s Watermelon</td>
<td>Emma Peterson and Jan Harris, English &amp; Modern Languages</td>
</tr>
<tr>
<td>3:40 p.m.</td>
<td>Color Poetry</td>
<td>Samuel Kurcab and Sonya Green, English &amp; Modern Languages</td>
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</table>
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

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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

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**Acknowledgements**

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- 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  

Faculty Mentors

Student Presenters

Symposium Sessions Chairs and Judges

Sodexo and Lipscomb Dining Services

Lipscomb University Entertainment and Technical Services

Lipscomb University Office of Event Management

Lipscomb University Communication and Marketing