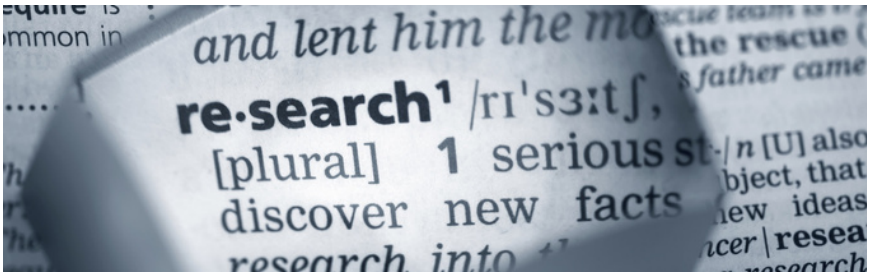

ANNUAL RESEARCH EMPHASIS WEEK

May 27-30, 2025

TABLE OF CONTENTS

La Sierra UNIVERSITY

ABOUT RESEARCH EMPHASIS WEEK

Research Emphasis Week is an annual tradition at La Sierra University, during which the research and scholarly production efforts of our undergraduate students are showcased and celebrated. With the recent participation of multiple disciplines and programs in addition to the long standing poster session, REW has truly become a campus-wide event.

Tuesday, May 27

5 PM (**South Hall 114**) **Honors**

Junior Presentations

Moses Milano

The impact of ocean acidification on the metabolic rate of Octopus bocki

John Banta

Discovery of an Endocannabinoid System in Octopus bocki

Raymond Kim

The Measurement of Metabolic Rate on Various Species of Salps

Pablo Jaquez

Impact of Porphyromonas Gingivalis Lipopolysaccharide on Platelet Function in Humans

Raina Olivas

Actions Speak Louder Than Words: How Physician Body Orientation and Clear Communication Encourage Regular Medical Visits

Tuesday, May 27, cont.

Brianna Barruga

Investigating State Transitions in Cygnus X-1 Using Fermi GBM

Wednesday, May 28

12:30 PM (**South Hall 114**) **Art & Design/Honors**

Panel Presentation: The CA "Creative Activities" in RSCA

Prof Tim Musso, Dr. Giovanni Santos and Nobuyuki Yano

2:00 PM (**South Hall 114**) **Honors**

Roundtable: Where Research Begins

Julia Ko, Ester Peiro, Daphne Prakesh, and Nyla Provost

5:15 PM (**PSC 230**)

Paper Presentations **FS Research & Scholarship Committee**

Zane Egbunike

Hail, O Philosopher: The Life and Philosophy of Justin Martyr

Arthur Kimbrough

Generation Z's Disillusionment With Organized Religion As Explored by "Hollow Mind"

Wednesday, May 29, cont.

6 PM (**PSC**) **FS Research & Scholarship Committee**

Poster Presentations
Various Students

7 PM (**Cossentine Hall 100**)

Keynote Lecture
Dr. Lee Grismer
Adventure, Discovery, and Dealing with the Unexpected: Navigating your scientific career

REW Student Awards

Thursday, May 29

5 PM (**Humanities 113**) **English**

Creative and Scholarly Panel:
Artificial Intelligence's impact on Writing, Teaching, and Careers

Prof. Cassandra Hicks
Ilana Lomax
Aleah Clarke
Juliana McClair

Dr. Lora Geriguis, facilitator

Thursday, May 30, cont.

5 PM (**South Hall 114**) **Honors**

Junior Presentations

Shani Taylor

Student Attention in Relation to Teaching Styles

Emily Sandoval Plouffe

Analyzing Stable Isotopes in Various Salp Species and Life Cycles for Trophic Level

Adam Tsao

Shaiana Taylor

Minority Mixed Race Experiences

Yannik Gibson

The Effects of Ocean Acidification on Hypoxia Tolerance in Octopus bocki

Olivia Genobaga

Cultivating Community Through Visual Storytelling

Poster Session

Wednesday, May 28, 2025, 6 PM (**PSC Main Hall**)
Students standing by their posters [poster location]

Angelina Arvizu^ [**53**] Biology
(**Luis Ortega, Landon Parchamento***)
Investigating the role of substrate composition and the development and stability of aquatic ecosystems

Akua Asamoah [**59**] Psychology
Trust, Attitudes, and Behaviors: AI Use of College Students

Kallysta Ballweber^ [**25**] Biology
(**Tanner Cox***)
The Influence of Terminal Proteins in DNA Replication

John Banta [**23**] Psychology
For the Bible Tells Me So: Special Revelation, Evolution Acceptance, and Moral Conflict

Samantha Barzola [**27**] Psychology
Exploring Relationship Fulfillment as a Mediator Between Belief in a Higher Power And Meaning in Life

Sungyoung Choi^ and Tommie Cristales* [**29**]
Chemistry & Biochemistry
(**in collaboration with Dr. Marco Allard**)
Study of Pseudo-First and Second Order Kinetics of Methyl Green Under Basic Condition

Matthew Cosgrove^ [**21**] Biology
(**David Jang, Yongjoon Kwon & Aurora Sutorus***)
Biomass Effects on Local Ecosystems: Sweet Gumballs vs. Avocado Leaves

^Lead Author *Additional Author(s)

Tommie Cristales [**13**] Chemistry & Biochemistry
(**Tristan J. Allard & Richard D. Rakijian***)
(**in collaboration with Dr. Marco Allard**)
Towards Training a Machine Learning Algorithm to Estimate Total Plant Biomass From Single Agricultural Images

Daniel Conrado^ [**60**] Biology
(**Emily Teo, Emily James, Vanya Banuelos***)
Filtration Power of Different Mosses

Martina Del Re^ [**62**] Biology
(**Benjamin Arriola, Kassandra Gutierrez & Chrystian Montalvo***)
Filtration Power of Different Mosses

Jacob Dominguez^ [**38**] Biology
(**Logan Rosal, Lucas Park & Suk Hyun Moon***)
Implications of Nutrient Pellets on Freshwater Ecosystems

Jacob Dominguez^ [**34**] Biology
(**Lauren Michel & Ethan Nguyen-Khoa***)
Aversion to Orally Administered THC Derivative in Octopus bocki

Ingrid Escudero [**4**] Psychology
Does Trust in Authority Mediate the Relationship Between Agreeableness and Susceptibility to Misinformation?

Abigail Foldenauer [**9**] Psychology
Impulsivity and Perceived Disease Threat as Predictors of Trust in Influencers and Physicians

Anheli Franco [**52**] Psychology
The Effects of Negative Urgency and FOMO on Problematic Short-Form Content Use

Felipe Guevara [**20**] Biology
Characterization of Bacteriophage Jeeves Genes 58, 72, 86, and 97: Identification of Toxic Genes 86 and 97 in Mycobacterium smegmatis

Felicity Hernandez [**46**] Biology
Characterizing Cytotoxic Effects of Phage Jeeves Genes 55, 69, 81, and 83 in Mycobacterium Smegmatis Through Molecular Cloning and Cytotoxicity Assays

Susi Marie Hernandez [**26**] Psychology
Cognitive Task Influence on Duration Estimation Under Body Orientations

Adam Johnson^ [**63**] Biology
(**Traysen Nhem***)
Terminase in a Lysis Cassette

Gihanna Kelly [**32**] Psychology
Social Media Addiction, Environmental Distraction and Divided Attention on Time Perception Accuracy

Mia Kim^ [**19**] Chemistry & Biochemistry
(**Divinity Monge & Woobin Kim***)
(**in collaboration with Dr. Jennifer Helbley**)
Self-Organizing Lyotropic Liquid Crystals as Solid Electrolytes for High-Performance Li-Ion Batteries

Cayla Kim^ [**24**] Biology
(**Elizabeth Ton, John Banta, Arianna Perez, Monique McGuire, Jefferson Clark,***)
(**in collaboration with Dr. Arun Muthiah**)
Biochemical characterization, antimicrobial resistance patterns, and biofilm formation among Enterococcal isolates collected from LSU

Hojeong Kim^ [**64**] Biology
Exploration of Bacteriophage Jeeves' genes 56, 70, 84, and 95: Their Functions and Toxicities in Mycobacterium smegmatis

Mason Kim [**43**] Biology
Observing Phenotypic Effects of Jeeves Genes 57, 71, 85, and 96 on Mycobacterium smegmatis

Woojoo Kim^
(**Annika Samayoa, Ethan Wang & Kristen Ngo***) [**5**]
Biology
(**in collaboration with Dr. Nate Sutter**)
Nematode Species Display Preference to Host Types in a Phoretic Relationship

Estrella Klar^ [**30**] Biology
(**Karenna Brand***)
Hunting for Holin-like Proteins in GK Bacteriophages

Yechan Bailey Lim^ [**51**] Biology
(**Karina Gorostieta-Lopez & Robert Whitaker***)
Environmental Effect on Daphnia in Variable Organic Conditions

Ema Ludwig [**66**] Biology
(**Emily Teo, Emily James, Vanya Banuelos***)
Effects of Eutrophication on Small Scale Freshwater Aquatic Environments

Emily Mata^ [**11**] Biology
Diane Marikit Tio, Sophia Aguilar & Thang Lian*
Ecological Effects of Organic vs. Inorganic Nutrient Sources in Pond Jar Ecosystems

Noah McMillan & Ethan Nguyen-Khoa^ [**44**] Biology
(**Jose Salome Correa***)
(**in collaboration with Drs. Jesse Grismer & Nate Sutter**
Searching for Sauria SINEs

Noah McMillan^ [**36**] Biology
(**Jaziel Peralta***)
Novel Protein-Based Ways to Categorize Phages: Using Lysin

Lauren Michel [**40**] Biology
(**in collaboration with Dr. Jesse Grismer**)
Taxonomic Revision of Bridle Snakes (Lycodon) from Peninsular Malaysia With a Description of a New Species

Emily Miklos^ [**48**] Biology
(**Garren Gryte, Naomi Salazar Mateo & Columbus Batiste***)
Effects of Adding Nitrogen to Pond Jar Ecosystems

Ruth Montiel [**67**] Biology
Overexpression of phage Jeeves genes 59 and 98 induces toxicity on Mycobacterium smegmatis, suggesting essential regulatory roles

^Lead Author *Additional Author(s)

Lia Hutchins and Shalom Mugenzi [**8**] Biology
Prevalence of tRNA in Bacteriophages from Streptomyces

Layla Murillo [**15**] Biology
Toxicity Levels of Mycobacteriophage Jeeves Genes 60, 74, and 88 in Mycobacterium smegmatis

Loreen Nepomuceno^ [**14**] Biology
Lauren Tran, Sofia Diez & Kaylee Hernandez*
Differences in Biofilm Production from Apricot vs. Pear Leaves

Ethan Nguyen-Khoa^ [**42**] Biology
Lauren Michel & Yehee Cho*
Beyond Sequence Similarity: Exploring Phylogenetic and Functional Convergence in Mycobacterium smegmatis Bacteriophages

Ester Peiro [**49**] Chemistry & Biochemistry
(**in collaboration with Dr. Michael Gutierrez**)
The Use of Acetylsulfonic Acid as an Alternative to Chlorosulfonic Acid in Sulfanilamide Synthesis

Kassandra Ramos [**22**] Psychology
Linking Personality and Health: The Effects of Neuroticism and Stress on Sleep Quality

David Rodriguez [**3**] Psychology
The Effects of Sleep and Source Monitoring on Memory

Julienne Role [**16**] Biology
Successful Molecular Cloning and Identification Gene 61 as Toxic in Mycobacterium smegmatis Phage Jeeves

^Lead Author *Additional Author(s)

Natalie Ruiz [**31**] Biology

The Toxicity of Jeeves Genes 62, 76, and 90 in Mycobacterium smegmatis.

Annika Samayoa^ [**6**] Physics
(**Yeeun Ji***)

(**in collaboration with Dr. Gary Case**)

Preliminary Analysis of the Flares from GRO J2058+42 and SWIFT J1728.9-3613 Using FERMI/GBM

Annika Samayoa [**7**] Biology

Molecular Cloning of Genes 63, 77, 91, & 100 and Phenotypic Assays of toxic genes 77 & 91 and non-toxic genes 63 & 100 of the Mycobacterium smegmatis bacteriophage Jeeves

Matthew Shelton [**71**] Psychology

Mental Health Mediating Social Support on Cognitive Performance?

Symere Shelton [**12**] Psychology

The Effect of Positive Emotion, Depression, and Gender on False Memories in Student Athletes

Ahmi Shin^ [**55**] Biology
(**Hyeri Kang***)

Genomic Insights into the Relationship Between Clusters GK and GI: Suggesting New Ways to Cluster Phages

Summer Solis ^ [**17**] Chemistry & Biochemistry
(**Tabitha Usery, Mia Kim, Joaquin Reyes, Grace Young, Kate Ball***)
(**in collaboration with Dr. Jesica Jones**)

Beta-Glucosidase B Mutants I170V, E388D, and N304H

Shaiana Taylor [**50**] Psychology
Mixed Race Identity: The Role of Acceptance and Hierarchy

Shani Taylor [**10**] Psychology
Auditory Processing's Effect on Academic Performance

Mateo Toledo & John Kang [**69**] Biology
Comparing Endonuclease VII proteins within Barncat

Adam Tsao & Jaden Chen [**57**] Biology
(**in collaboration with Dr. Arturo Diaz**)
Unraveling the Toxic Gene Repertoire of Bacteriophage Lebron: Insights into Phage-Host Interactions and Potential Antimicrobial Strategies

Zadie Tsao [**65**] Biology
Investigating Toxic Characteristics of Mycobacteriophage Jeeves Genes 65, 79, 93, and 102 in host Mycobacterium smegmatis

Madyson Vaca, Rachel Yin, Benjamin de Bivort, & David Zimmerman [**61**] Biology
(**in collaboration with Dr. Arturo Diaz**)
Long-Term Preservation of Drosophila Embryos Using Cryogenic Freezing

Andrew Velasquez [**1**] Biology
Amplification, Plasmid Assembly, Transformation, and Cytotoxicity Assays of Jeeves Genes 66,80, and 94

Jace Woods, Giovanni Campos, Cristofer Carazo, & Raymond Gow-Sujo [**28**] Biology
Assessing Substrate Effects in Experimental Aquatic Ecosystems

2025 RESEARCH EMPHASIS WEEK KEYNOTE PRESENTATION

Dr. Lee Grismer
Professor, Biology

ADVENTURE, DISCOVERY, AND DEALING WITH THE UNEXPECTED: NAVIGATING YOUR SCIENTIFIC CAREER

Dr. L. Lee Grismer is an internationally renowned herpetologists and photographer who has conducted field work all over the world. He has published well over 500 scientific papers and has written five books. Dr. Grismer received his BS and MS degrees from San Diego State University and his Ph.D. from Loma Linda university. Along with having been a professor at La Sierra University for 30 years he holds academic positions at various institutions throughout Southeast Asia and serves on several of their graduate committees. Dr. Grismer's current research is focused in Myanmar, Cambodia, Malaysia, and Vietnam but along with Dr. Jesse Grismer, mentors students with research programs in southern California. He is currently credited with describing more new species of amphibians and reptiles than any living person and has had seven new species named in his honor.

Poster Location, by Slot Assignment

1. Velasquez, Andrew
3. Rodriguez, David
4. Escudero, Ingrid
5. Kim, Woojoo
5. Samayoa, Annika
5. Wang, Ethan
5. Ngo, Kristen
6. Samayoa, Annika
6. Ji, Yeeun
7. Samayoa, Annika
8. Hutchins, Lia
8. Mugenzi, Shalom
9. Foldenauer, Abigail
10. Taylor, Shani
11. Mata, Emily
11. Tio, Diane Marikit
11. Aguilar, Sophia
11. Lian, Thang
12. Shelton, Symere
13. Cristales, Tommie
13. Allard, Tristan J.
13. Rakijian, Richard D.
14. Nepomuceno, Loreen
14. Tran, Lauren
14. Diez, Sofia
14. Hernandez, Kaylee
15. Murillo, Layla
16. Role, Julienne
17. Solis, Summer
17. Usery, Tabitha
17. Kim, Mia
17. Reyes, Joaquin
17. Young, Grace
17. Ball, Kate
19. Kim, Mia
19.Monge, Divinity
19.Kim, Woobin
20.Guevara, Felipe
21. Jang, David
21. Kwon, Yongjoon
21. Sutorus, Aurora
22. Ramos, Kassandra
23. Banta, John

Poster Location, by Slot Assignment

24. Kim, Cayla
24. Ton, Elizabeth
24. Banta, John
24. Perez, Arianna
24. McGuire, Monique
24. Clark, Jefferson
25. Ballweber, Kallysta
25. Cox, Tanner
26. Hernandez, Susi Marie
27. Barzola, Samantha
28. Woods, Jace
28. Campos, Giovanni
28. Carazo, Cristofer
28. Gow-Sujo, Raymond
29. Choi, Sungyoung
29. Cristales, Tommie
30. Klar, Estrella
30. Brand, Karenna
31. Ruiz, Natalie
32. Kelly, Gihanna
34. Dominguez, Jacob
34. Michel, Lauren
34. Nguyen-Khoa, Ethan
36. McMillan, Noah
36. Peralta, Jaziel
38. Dominguez, Jacob
38. Rosal, Logan
38. Park, Lucas
38. Moon, Suk Hyun
40.Michel, Lauren
42.Nguyen-Khoa, Ethan
42.Michel, Lauren
42. Cho, Yehoo,
43. Kim, Mason
44.McMillan, Noah
44.Nguyen-Khoa, Ethan
46.Hernandez, Felicity
48.Miklos, Emily
48.Salazar, Naomi
48. Gryte, Garren
48. Columbus, Batiste
49. Peiro, Ester

Poster Location, by Slot Assignment

50. Taylor, Shaiana
51. Lim, Yechan Bailey
51. Gorostieta-Lopez, Karina
51. Whitaker, Robert
52. Franco, Anheli
53. Arvizu, Angelina
53. Ortega, Luis
53. Parchamento, Landon
55. Shin, Ahmi
55. Kang, Hyeri
57. Tsao, Adam
57. Chen, Jaden
59. Asamoah, Akua
60. Conrado, Daniel
60. Teo, Emily
60. James, Emily
60. Banuelos, Vanya
61. Vaca, Madyson
61. Yin, Rachel
61. de Bivort, Benjamin
61. Zimmerman David
62. Del Re, Martina
62. Arriola, Benjamin
62. Gutierrez, Kassandra
62. Montalvo, Chrystian
63. Johnson, Adam
63. Nhem, Traysen
64. Kim, Hojeong
65. Tsao, Zadie
66. Ludwig, Ema
66. Teo, Emily
66. James, Emily
66. Banuelos, Vanya
67. Montiel, Ruth
69. Toledo, Mateo
69. Kang, John
71. Shelton, Matthew