

**32nd Annual
Centenary College Academic Research Conference
Thursday, April 18, 2024**

Each year Centenary students and faculty present their best works of exploration and invention at our annual Research Conference. A community event for over 30 years, the Research Conference is modeled on long-standing academic traditions of conference-based information sharing and feedback.

The 2024 Research Conference is sponsored by the Douglas F. and Marion S. Attaway Foundation and is made possible with the support of Centenary's Convocation Committee, the Office of the Provost, Campus Activities Board, and the Student Government Association.

This year's Research Conference was organized by Dr. Scott Chirhart (Biology), Dr. Jessica Alexander (Psychology), Dr. Amanda Donahoe (Political Science), Dr. Chrissy Martin (English), and Dr. Kyra Rietveld (Art). Special thanks to Jeremy Johnson for his graphic design skills, Candace Metoyer for her web skills, and to Connie Whittington for her unwavering support of our students and faculty.

Generous thanks to all our judges of oral presentations and posters. We could not accomplish this conference without the work and support of the entire Centenary community from mentoring student research to printing programs to moderating and judging sessions. Thank you all!

Winners from this year's Research Conference will be presented with awards at the Annual Honors Convocation on May 3 at 5:15 pm in Brown Chapel.

QUICK VIEW

Oral Presentation Sessions

8:20-9:20 SESSION 1

- 1A. Natural Sciences Oral Presentations (Mickle 114)**
- 1B. Social Sciences Panel I (Kilpatrick)**
- 1C. Social Sciences Panel II (Smith 107)**
- 1D. Arts and Humanities Oral Presentations (Whited Room)**

9:30-10:50 SESSION 2

- 2A. Natural/Social Sciences Oral Presentations (Mickle 114)**
- 2B. Social Sciences Panel I (Kilpatrick)**
- 2C. Social Sciences Panel II (Smith 107)**
- 2D. Arts and Humanities Oral Presentations (Whited Room)**

11-12 Keynote (Whited Room)

12:45-1:45 SESSION 3

- 3A. History Panel (Mickle 114)**
- 3B. Humanities Panel (Whited Room)**

2-3:20 SESSION 4

- 4A. Social Sciences Panel (Mickle 114)**
- 4B. Arts and Humanities Oral Presentations (Whited Room)**
- 4C. Arts and Humanities Panel (Kilpatrick)**

3:30-4:30 SESSION 5

- 5A. Arts and Humanities Oral Presentations (Whited Room)**
- 5B. Arts and Humanities Panel (Kilpatrick)**

4:40-5:40 SESSION 6

- 6A. Creative Writing Performances (Whited Room)**
- 6B. Arts and Humanities Panel (Kilpatrick)**

History Panels in Smith 108 will follow their own time schedule from 8:20-10:50 and from 12:45-4:30 (see expanded schedule for more information)

Poster Presentations along the Mickle 2nd floor hallway – 2:30-4:30 pm

EXPANDED VIEW

8:20-9:20 SESSION 1

1A. Natural Sciences Oral Presentations (Mickle 114)

Moderator: David Kordahl

1. Uptake of Toxic Chromium (VI) from Water Using Acetate-Intercalated Layered Zinc Hydroxide - Monica Percino
2. Foraminiferal Analysis and Paleoenvironmental Reconstruction of the Late Cretaceous Ozan Formation Exposure at North Sulphur River, NE Texas - Austyn Benoit & Monica Percino
3. The Effects of Sulfide-Releasing Pharmaceutical Drugs on Xanthine Oxidase Dependent Nitrite Reduction to Nitric Oxide - Caymen Hawkins

1B. Social Sciences Panel I (Kilpatrick)

Moderator: Barbara Davis

Topic: Centenary's Student Managed-Investment Fund 2023 Results

1. Large Cap Portfolio - Jobee Boone
2. International Equity Portfolio and Fixed-Income Portfolio - Jordan Danzell
3. Mid to Small Cap Portfolio and Alternative Assets Portfolio - Isabella Giglio

1C. Social Sciences Panel II (Smith 107)

Moderator: Amy Friesenhahn

1. Do Sanctions Work - John Smith
2. French and Francilian Public Opinion Regarding the Hosting of the 2024 Olympic Games in Paris - Juliette Gribovalle
3. Reagan Democrats...Trump Democrats? - Kevin Hinson

1D. Arts and Humanities Oral Presentations (Whited Room)

Moderator: Matthew Blasi

1. Female Athletes or Sexual Objects: Systemic Abuse in Sports Culture - Brooke Sandefur
2. 'A Damn Monster Movie': The Beast of Greed Within Rocky - Jackson Melancon
3. Creative Problem Solving and Website Design for Tribe Comics and Games - Mackenzie Newlan

9:30-10:50 SESSION 2

2A. Natural/Social Sciences Oral Presentations (Mickle 114)

Moderator: Jessica Alexander

Topic: Cognitive Neuroscience and the Arts

1. The Neurological Underpinnings of Art Therapy - Pierce Collier, Jasmine Jones, Melissa Krzywanski, Kiara Liedy
2. Architecture, the Built World, and Awe - Tamera Alexander, Maddie Davis, Caymen Hawkins, Sarah Murphy
3. Gardening and the Mind - Jacob Nguyen, Abigail Rinaudo, Adele Bihler, Tessa Eby
4. The Mind Behind Music Preference - Mackenzie Clark, Isabella Dominguez, Selena Edris, Mary Large, Mackenzie Olinger
5. The Impact of Interactive and Imaginative Play on Empathy and Development – Mack Grant, Siniya Edwards

2B. Social Sciences Panel I (Kilpatrick)

Moderator: Priyanka Chakraborty

1. The Relationship Between Wealth Accumulation and Homeownership - William Bradford
2. Exploring Happiness: Comparing the Impact of Secular and Religious Variables - Jackson Ossman
3. Generational Impacts on Self-Esteem, Attitudes, and Job Satisfaction: Evidence from the NLS - Andrew Turner
4. Comparing the Impact of Economic Variables Upon Presidential Popularity - Glay Collier

2C. Social Sciences Panel II (Smith 107)

Moderator: Amy Friesenhahn

1. The Effects of Questioning Voter Integrity on Voter Turnout - Avery Cauley
2. Exploring the Effects of Social Media Activism on Unconventional Youth Political Engagement - Channing Hall
3. Our Bodies, Our Reproductive Rights - Julie Barrios
4. Centenary and Slavery: The Presence of African Americans Before, During, and After the Civil War – Andrea Kay

2D. Arts and Humanities Oral Presentations (Whited Room)

Moderator: Matthew Blasi

1. The Post-Mortem Glass Ceiling of a Woman - Brooke Sandefur
2. A Reclaiming for the Maiden by the Sea: A Critical Reading of “Annabel Lee” - Julianna Malloy
3. (Don't) Give Up on Your Dreams and Die: A Comic Panel Analysis of The Sandman - Kai Young
4. Looking out for the Future - Aaron Gonzalez

11-12 Keynote (Whited Room)

12:45-1:45 SESSION 3

3A. History Panel (Mickle 114)

Moderator: Jessica Alexander

Topic: Medical Takeovers- Doctors and Disease in American History

1. Dr. Marion Sims: Medical Trailblazer or Unethical Racist - Kiara Liedy
2. Forced Perceptions: The Response to Male Physicians Overtaking Midwives in America - Dani Kimmey
3. History of Cholera - Jacob Nguyen

3B. Arts and Humanities Panel (Whited Room)

Moderator: Andia Augustin-Billy

Topic: Reading Caribbean Gender and Sexuality through Oonya Kempadoo's Buxton Spice

1. Introduction - Victoria Padilla Chavez
2. The Significance of the Buxton Spice Mango Tree - Anaiah Lamont
3. The Pervasive Normalization of Violence and Objectification of Women's Bodies - Magnus Nielsen
4. Learning Gender: Lula's Observations of the 'Man-Self' - Jo Hoffman

2-3:20 SESSION 4

4A. Social Sciences Panel (Mickle 114)

Moderator: Jessica Alexander

1. Word meaning or speaker gender: The effects of semantic and pragmatic violations on memory for sentence-final words - Mackenzie G. Williams
2. Women Are Still Facing Social Repercussions for Using Vocal Fry - Gracie Napier
3. Exploration of How Motivations, Rewards, and Barriers Affect Those Who Volunteer Unpaid Time at Women's Shelters - Isabelle Dominguez
4. Racialized Work Experiences on the Blue Line - Nyla Pierce

4B. Arts and Humanities Oral Presentations I (Whited Room)

Moderator: Matthew Blasi

1. The Id and Transformative Trauma in Poe's "The Black Cat" - Michael Micinski
2. Psychoanalysis and "The Flowers" - Kaleb Atkinson
3. A Psychoanalytic Evaluation of "Sonny's Blues" by James Baldwin - Riley Keene
4. A Psychoanalytic Reading of "Mirror" by Sylvia Plath - Braydon Gaston

4C. Arts and Humanities Oral Presentations II (Kilpatrick)

Moderator: Mandi Donahoe

Topic: Media Made America: The Consequences of Public Perception

1. The Violent Fireman: Media Depictions and Public Opinion of Firefighters in Nineteenth and Twentieth Century America - Dani Kimmey
2. Women v. The Media - Sydney Welch
3. God, Country, and Monkeys - Magnus Nielsen

3:30-4:30 SESSION 5

5A. Arts and Humanities Oral Presentations I (Whited Room)

Moderator: Chrissy Martin

1. To Cuckold a God: How Chaucer uses "The Merchant's Tale" to Ridicule the Emerging Middle Class - Jo Hoffman
2. Mechanical Viscera - Jae Tuggle
3. Art and Inspiration - Karisma S. Cooper

5B. Arts and Humanities Oral Presentations II (Kilpatrick)

Moderator: Mandi Donahoe

Topic: Southern Womanhood and Politics

1. Homefront to Klavern - Jordan Hall
2. Suffrage in the South - Debbie Brown
3. Apolitical Politics: Women's Influence on American Society - Madi McCrary

4:40-5:40 SESSION 6

6A. Creative Writing Performances (Whited Room)

Moderator: Chrissy Martin

1. Audrey M. Smith Endowed Poetry Award Finalists:
 - Aaliyah Vines - "Ode to a Scuppernong Bush"
 - Megan McHugh - "Raid, I Cherish You"
 - Kaleb Atkinson - "Self Portrait as a Neutron Star"
2. Zeak Monroe Buckner Writing Award Finalists:

- Siobhan Stanley - "If I'm Being Honest on Hinge"
- Hayden Cagle - "I Wish I Could Waltz Across the Sky"
- Emma Greer – "Pupa"

6B. Arts and Humanities Oral Presentations (Kilpatrick)

Moderator: Jama Grove

Topic: Segregation, Incorporation, or Assimilation: Inclusion and Exclusion in the United States

1. Waves of Irish Immigration and Assimilation during the Turn of the Century - Reilly Dymond
2. Shabbat in Shreveport: A Case Study of Southern Jewish History – Beth Vogler
3. Redlines and Black Communities in the Urban South – Andrea Kay

American History Oral Presentations (Smith 108)

Moderator and Research Advisor: Jama Grove

These panels will follow their own time schedule with a break for the Keynote Panel at 11 and lunch from 12-12:45.

Panel 1: American Music History

1. Elvis Presley and his Impact on American Music - Elizabeth Canady
2. Modern Influences of Jazz Music - Stan Melton
3. Tupac Shakur - Rubin Seastrunk
4. The power of Artistic Expression: What Hip Hop did for Black Americans. - Devon Strickland

Panel 2: All Power to the People: Examining Civil Rights and Black Power

1. Speed and Struggle: Jesse Owens Against Racial Adversity - Emmanuel Walker-Hines
2. Martin Luther King Jr.'s "I Have a Dream" speech and "Letter from a Birmingham Jail" - Isaiah King
3. Influential African American Women in the Black Power Movement - Yadneli Molina-Maldonado
4. Beyond the "Militant:" Black Community Uplift - Gerald Murage
5. Beyond the Bullet: Examining Fred Hampton's Legacy and the Chicago Black Panther Party's Impact - Bakari Nelson

Panel 3: Education, Ideology, and Americanism

1. Education as Colonialism - Dominick Strickland
2. History of Education in Louisiana - Adriauna Wade
3. How Hazing Fuels White Masculinity - Mavy Gigante
4. The Origins of Modern Business Practice - Carl Lind

Panel 4: Law and Order (?): Americans and the Law in the 20th Century

1. The Game Changer- Jackie Robinson - Carter Webb
2. How Federal Policies have Affected the Growth of Entrepreneurship in Modern America - David Carrillo Marquez
3. The Rights of Married Women: Exploring the Withdrawal of the Marital Rape Exemption - Marina Rodriguez

4. Mobsters: Were they really the "Goodfellas"? - Andrew Landry
5. Women's Suffrage in the Progressive Era - Riley Myers

Panel 5: US and the World

1. Jackie Robinson Changing Sports and the way of the World - Brandon Newton
2. How Governmental Control From WWII- Affected Quality of Goods and Safety of Citizens - William Riley
3. Economic Incentives Behind Ingredient Replacement by Coca Cola. - William Harris
4. The Flip of Tides from the Boots on the Ground; Battle of the Bulge. - Jacob Ramsey
5. Integration, Practices, and the Economy on the Homefront during the Second World War - Bryce Bienvenu

Poster Presentations (Mickle 2nd floor) – 2:30-4:30 pm

Moderator: Scott Chirhart

1. HCMV-Induced Signaling Upregulates Translation of Stx6 in Primary Human Monocytes - Madison McKnight
2. Functional Characterization of Novel lncRNA in Arabidopsis thaliana - Tarif Islam
3. The Role of Stem Cells and Angiotensin Converting Enzyme 2 in Novel Ischemic Stroke Therapy - Anacelia Galeano-Balam
4. The use of diverse anatomical models increases Black students feeling of belonging and motivation in STEM Classrooms - Alexa Hinojosa, Anacelia Galeano-Balam, & Jennifer Saldana
5. A Sleep and Self-Care Study: Do college students prioritize their health? - Brennan Amato, Kyrá Stokes, Ana De La Fuente, & Madison Davis
6. Determining the knowledge, attitudes and practice that drug usage has on college students. - Shawn Dawson & Trent Smith
7. The Beauty of Health and Fitness: Knowledge, Attitudes, and Practice of Physical Activity - Tanner Hooker, Kyron Williams, & Alexis Roach
8. Pitching with Physics - Royce Congi
9. Modelling The Wilberforce Pendulum and Coupled Oscillations - Emma Foster
10. Refining Influential Factors on the Trajectory of a Soccer Ball - Dylan Allred
11. Mechanics of the Three-Body Problem - Jackson Spataro
12. The Magmatic Evolution of two Central Snake River Plain Basaltic Flows - Austyn Benoit & Monica Percino
13. Paradoxical regulation of cellular redox homeostasis by hydropersulfides and hydropolysulfides via Cystathionine γ -lyase phosphorylation - Cameron R. Cason
14. Mapping the Interactions of CST and BRCA1-BARD1 in DNA Resection - Haley Bordelon

FULL PROGRAM

8:20-9:20 SESSION 1

1A. Natural Sciences Oral Presentations (Mickle 114)

Moderator: David Kordahl

1. Uptake of Toxic Chromium (VI) from Water Using Acetate-Intercalated Layered Zinc Hydroxide

Presenter: Monica Percino

Research Advisors: Dr. Dewan Russel Rahman¹ and Dr. Allen W. Apblett²

¹ *Chemistry, Centenary College of Louisiana*

² *Chemistry, Oklahoma State University*

Layered zinc hydroxide has been commonly synthesized via precipitation reaction using the 1:1 ratio of a zinc salt and a base. As the precipitation reaction uses 1 equivalent base, half of the zinc ions cannot be consumed to produce a layered zinc hydroxide, rendering it chemically inefficient. Herein, the work developed a new synthesis route that exploits the chemistry of propylene oxide with zinc ions in water to synthesize a layered zinc hydroxide with a very high yield. Propylene oxide-assisted hydrolysis reaction of aqueous zinc acetate at 40 °C produced acetate-intercalated layered zinc hydroxide, $\text{Zn}(\text{OAc})_{0.33}(\text{OH})_{1.67} \cdot 0.50\text{H}_2\text{O}$ (zinc acetate hydroxide), with a yield of 93.6%. The prepared zinc acetate hydroxide was investigated for toxic chromium (VI) oxyanion uptake from water and found to be an effective material for removing dichromate ($\text{Cr}_2\text{O}_7^{2-}$) from water. Batch experiments showed efficient removal of high concentrations (100, 180, or 370 ppm) of dichromate in 24 hours. It was hypothesized that the effective dichromate uptake is not due to adsorption but instead due to the anion exchange property of zinc acetate hydroxide. Additionally, the uptake (mg/g) vs. initial concentrations of dichromate solutions was investigated to determine the maximum uptake capacity of dichromate onto the zinc acetate hydroxide. A pH investigation of a dichromate solution during a batch experiment was performed to corroborate the uptake process involving an anion exchange.

2. Foraminiferal Analysis and Paleoenvironmental Reconstruction of the Late Cretaceous Ozan Formation Exposure at North Sulphur River, NE Texas.

Presenter: Austyn Benoit & Monica Percino

Research Advisor: Dr. Saad Mohamed

Geology, Centenary College of Louisiana

The foraminiferal assemblage from sixteen samples of the Campanian Ozan Formation, found in the cliffs of the North Sulphur River in NE Texas, has been analyzed quantitatively to reconstruct paleoceanographic and paleoenvironmental parameters. This study is a preliminary (low resolution) quantitative analysis of foraminifera to determine the depositional environment of the Western Interior Seaway in the region during the Campanian age (72.1-83.6 million years ago). The outcrop is made up of approximately 45 feet of marly, marly-limestone, and limestone layers, deposited in the inner shelf. The sedimentary strata in the studied section contain diverse foraminiferal fauna, mainly dominated by planktonic species. Benthic forams dominate the assemblage with 68% in the lower 7 feet of the outcrop. The foraminiferal assemblage is planktic-dominated with a planktic-benthic ratio > 78% throughout the remainder of the outcrop. The planktic foraminiferal assemblage is mainly composed of small biserial *Heterohelix* species, small trochospiral, and planispiral species that are tolerant to low oxygen levels. Previous studies conclude that these species thrived during the expansion of the oxygen minimum zone, which was linked to high nutrient levels and a stratified water

column. Additionally, the foraminiferal assemblage included the trochospiral planktic species *Muricohedbergella delrioensis*, which might have shifted its coiling direction throughout the section, indicating a change in sea surface temperatures (SST). Further carbon and oxygen isotope analyses are needed for the *Hedbergella* calcareous tests to confirm its usefulness as a surface water paleothermometer.

3. The Effects of Sulfide-Releasing Pharmaceutical Drugs on Xanthine Oxidase Dependent Nitrite Reduction to Nitric Oxide

Presenter: Caymen Hawkins

Research Advisor: Chris Kevil, LSU Health Shreveport, Department of Pathology

Xanthine oxidase (XO) is an enzyme that helps to mediate the process of reduction of nitrite (NO₂⁻) to nitric oxide (NO) in hypoxic conditions. NO, in turn, is used in vasodilation and vascular remodeling in endothelial cells, leading to effects on blood flow in the cardiovascular system. Sulfide and other sulfide-releasing products in the past have been shown to induce the XO-mediated of NO₂⁻ reduction to NO in hypoxia. Being that patients of cardiovascular diseases are often in a state of ischemia (and therefore hypoxia) and lack sufficient levels of NO₂⁻, NO, and sulfide, a potential treatment that would increase sulfide levels would lead to NO being produced – and as a result, blood flow improving.

This project looked to see if the sulfide pro-drugs Sugammadex would release sulfide and mediate XO-induced NO₂⁻ reduction to NO. This was done using plate reader fluorescence. There were 2 forms of the experiment: one with just Sugammadex and the other including carbohyde compounds as well. The samples used to test these models were sodium trisulfide (Na₂S₃) and diallyl sulfide (DATS) as controls, and Sugammadex and five carbohyde compounds as the tested compounds. Each were tested at 3 varying pH's: 7, 8, and 9; they would be used to determine the optimal pH for the drug to release the sulfide.

The plate reader fluorescence models showed that a pH of 8 was the optimal release of sulfide for Sugammadex and the carbohyde compounds, meaning that the drug would be the most effective at that pH. From this subsequent data, it could be concluded that Sugammadex treated at a pH of 8 could be an effective mediator of XO-dependent NO₂⁻ reduction to NO.

1B. Social Sciences Panel I (Kilpatrick)

Moderator: Barbara Davis

Topic: Centenary College Student Managed Investment Fund Results 2023

Research Advisor: Dr. Barbara Davis

Frost School of Business, Centenary College of Louisiana

The purpose of the Centenary College Student Managed Investment Fund is to facilitate the academic objective of teaching the theory and practice of managing long-term investment portfolios with annual spending objectives through a real-world environment within the Frost School of Business. The SMIF began operations on April 23, 2004 with an initial contribution by a Centenary College donor of \$100,000. Since inception, there have been \$166,081, tax deductible, contributions into the SMIF and \$127,089 investment policy directed distributions to Centenary College. As of

December 31, 2023, the ending market value was \$241,720 and the dollar gain since inception has been \$202,728. Since the beginning of operations, the annual compound rate of return has been 6.27% and SMIF blended benchmark return has been 6.80%. Student presenters will focus on the 2023 returns for the asset classes of the portfolio. Comparisons of the actual returns to the designated benchmarks will be made and explained.

1. Large Cap Portfolio

Presenter - Jobee Boone

2. International Equity Portfolio and Fixed-Income Portfolio

Presenter - Jordan Danzell

3. Mid to Small Cap Portfolio and Alternative Assets Portfolio

Presenter - Isabella Giglio

1C. Social Sciences Panel 2 (Smith 107)

Moderator: Amy Friesenhahn

1. Do Sanctions Work

Presenter: John Smith

Research Advisor: Dr. Amy Friesenhahn

Political Science, Centenary College of Louisiana

Will Iran continue its nuclear programs with multiple sanctions tearing apart their already fragile economy? Many sanctions on Iran are linked to the uranium enrichment. At one time, International Atomic Energy Agency had inspectors evaluating Iran's nuclear program to keep the international community aware of their nuclear capabilities. Then the inspectors were limited to which sites could be visited and eventually kicked out. Will sanctions change Iran's nuclear program? I do not believe sanctions will work in Iran due to the repressive leadership over the population. I will investigate the period from 2006 to 2023. In this paper, I will answer the questions of what are sanctions? What are the objectives of sanctions, and the most important question of all, are sanctions working?

2. French and Francilian Public Opinion Regarding the Hosting of the 2024 Olympic Games in Paris

Presenter: Juliette Gribovalle

Research Advisor: Dr. Amy Friesenhahn

Political Science, Centenary College of Louisiana

This project is an examination of French and Francilian public opinion regarding the hosting of the 2024 Olympic Games in Paris. As France prepares to host this global event, voices are raised to express concerns regarding aspects such as transportation, security, housing, and social inequalities. Surveys reveal that a significant number of residents in the Île-de-France region perceive the organization of the Games negatively, particularly due to fears related to public transportation availability and the impact on student housing. Furthermore, there are a lot of criticisms regarding the exploitation of migrants and foreign workers on Olympic construction sites. By comparing this situation to other major sporting events, this project underscores persistent concerns regarding the economic and social repercussions of such events. Lastly, this project highlights the importance of understanding different perspectives to better grasp the challenges associated with hosting the 2024 Olympic Games.

3. Reagan Democrats...Trump Democrats?

Presenter: Kevin Hinson

Research Advisor: Dr. Amy Friesenhahn

Political Science, Centenary College of Louisiana

Black voters in America have historically voted for the Democratic Party in drastic numbers. Yet starting with the 2020 presidential election, President Donald Trump earned a noticeable increase in his share of black votes from the 2016 presidential election, and there are rumors of this trend continuing. I have compiled data that confirms not only the black voting bloc's historic alignment with the Democratic Party since the 1960s, but evidence of a party switch similar to the lost Democratic votes from Jimmy Carter going to President Ronald Reagan, which happened in such large numbers that it coined the term "Reagan Democrats." I will be examining the vote differential for Donald Trump with black voters and other historically Democratic voting blocs between the 2016 and 2024 presidential elections, as well as interviewing these people to find out why they have switched their votes.

1D. Arts and Humanities Oral Presentations (Whited Room)

Moderator: Matthew Blasi

1. Female Athletes or Sexual Objects: Systemic Abuse in Sports Culture

Presenter: Brooke Sandefur

Research Advisor: Dr. Matthew Blasi

English, Centenary College of Louisiana

Athletes are tough. From a young age, they train so that their bodies become machines of muscle, endurance, and pure grit. They are taught that to achieve success, they must push past their breaking point, both physically and mentally. Sports traditionally enforce environments where character traits like discipline, strength, perseverance, and mental toughness are cornerstones of success, punishing weakness and rewarding strength. Athlete A, produced by Bonni Cohen and John Shenk, recounts the stories of 156 gymnasts that were sexually abused by Dr. Larry Nassar and the subsequent consequences that emerged after reporting the abuse. The film reflects broader cultural conversations about gender, power, and accountability, and contributes to ongoing discourse concerning the ethics of sports institutions and the protection of young athletes. The Netflix documentary Athlete A examines the culture of an organization that prioritizes winning over the well-being of their athletes, perpetuating the systemic disempowerment of female athletes.

2. 'A Damn Monster Movie': The Beast of Greed Within Rocky

Presenter: Jackson Melancon

Research Advisor: Dr. Matthew Blasi

English, Centenary College of Louisiana

For almost half a century, the 1977 Best Picture—winning film, Rocky, has been inspiring audiences to achieve anything with hard work and dedication by just believing in themselves. Directed by John G. Avildsen, the film shares the story of Rocky Balboa, a boxer living in poverty who's given a chance to face the world heavyweight champion, Apollo Creed. Although Balboa comes up short in the end, a man who comes from nothing and getting an opportunity to show what he can do is the underdog

story people root want to root for, both in films and real life. However, this masterpiece means so much more than just an inspiring tale about how anyone can make it big. In *Rocky*, the titular character is driven by sheer determination, but the world that surrounds the “Italian Stallion” exploits him, masquerading their greed as the “American Dream.”

3. Creative Problem Solving and Website Design for Tribe Comics and Games

Presenter: Mackenzie Newlan

Research Advisor: Dr. Michelle Glaros

Communication, Centenary College of Louisiana

Tribe Comics and Games is a small comics shop ran by co-owners Eric and Roy in South Austin. Prior to this project, their website lacked detail, information beyond basic contact information, and did not give an accurate picture of what Tribe Comics and Games’ did differently than it’s competitors: authentic community, honesty, and unique location in South Austin. The creative problem solving and website design for Tribe Comics and Games considers what current customers might want to know, what new customers might be looking for, and what would be possible for the owners to easily maintain. Assets like new business cards and social media templates were created to connect to and expand on Tribe’s brand, while remaining simple for the owners to use. The new website was created to direct traffic to Tribe’s phone, answer any simple questions users would have, and be straightforward to preserve.

9:30-10:50 SESSION 2

2A. Natural/Social Sciences Oral Presentations (Mickle 114)

Moderator: Jessica Alexander

Cognitive Neuroscience and the Arts

Research Advisor: Dr. Jessica Alexander

Psychology, Centenary College of Louisiana

The students of the Cognitive Neuroscience class investigated topics related to neuroscience and the arts. Each group will present on some aspect of the arts, the neural underpinnings of that system, and what current research is happening in the field. The students have been working on presenting complex neuroscience information to a general audience and thinking about neuroscience in a liberal arts context.

1. The Neurological Underpinnings of Art Therapy

Presenter: Pierce Collier, Jasmine Jones, Melissa Krzywanski, Kiara Liedy

2. Architecture, the Built World, and Awe

Presenter: Tamera Alexander, Maddie Davis, Caymen Hawkins, Sarah Murphy

3. Gardening and the Mind

Presenter: Jacob Nguyen, Abigail Rinaudo, Adele Bihler, Tessa Eby

4. The Mind Behind Music Preference

Presenter: Mackenzie Clark, Isabella Dominguez, Selena Edris, Mary Large, Mackenzie Olinger

5. The Impact of Interactive and Imaginative Play on Empathy Development

Presenter: Mack Grant, Siniya Edwards

2B. Social Sciences Panel (Kilpatrick)

Moderator: Priyanka Chakraborty

1. The Relationship Between Wealth Accumulation and Homeownership

Presenter: William Bradford

Research Advisor: Dr. Mohammad Ali

Economics, Centenary College of Louisiana

This study investigates the relationship between home ownership and wealth accumulation among low-income households in the United States. Utilizing data from the Survey of Consumer Finances (SCF), we examine how homeownership status influences wealth accumulation, considering factors such as income, education level, and personal finance knowledge. Our analysis employs econometric modeling techniques to explore the impact of homeownership on wealth accumulation, controlling for relevant socioeconomic variables. The findings shed light on the role of homeownership as a wealth accumulation tool for low-income households and provide insights into the broader socioeconomic factors influencing wealth accumulation patterns. Understanding these dynamics is crucial for policymakers and practitioners aiming to address economic disparities and promote financial stability among low-income populations.

2. "Exploring Happiness: Comparing the Impact of Secular and Religious Variables"

Presenter: Jackson Ossman

Research Advisors: Dr. Mohammad Ali

Economics, Centenary College of Louisiana

In life mostly everyone is in the pursuit of happiness. People seek this in many different ways. Some look towards a higher power, while others tend to be more secular and materialistic. In this research I look at the impact secular and religious variables have on an individual's happiness levels. There are studies that cover these specific things, but not many that talk about both of these in the same study.

3. Generational Impacts on Self-Esteem, Attitudes, and Job Satisfaction: Evidence from the NLS

Presenter: Andrew Turner

Research Advisors: Dr. Priyanka Chakraborty & Dr. Mohammad Ali

Economics, Centenary College of Louisiana

When thinking about the past, many people think about how their parents may have impacted them in various ways of their life. The current research aims to understand how mothers' self-esteem could influence their children's job satisfaction, industry, and income later in life. The research will focus on data collected from the National Longitudinal Surveys (NLS), where the NLS collected data in 1979 with 12,686 participants and then data on their children. NLS provides a unique opportunity to look at generational trends and see how self-esteem, social attitudes, and job outcomes have shifted over the past few decades and how strong of an influence parents may have.

4. Comparing the Impact of Economic Variables Upon Presidential Popularity

Presenter: Glay Collier

Research Advisor: Dr. Priyanka Chakraborty
Economics, Centenary College of Louisiana

Given recent notable events in the political arena along with clear fluctuations in key economic metrics, there is ample data regarding presidential popularity and the economic variables potentially associated with it. This paper seeks to build on the extensive work of previous decades in the field of econometrics and political science by examining the effects of GDP per capita, inflation rates, and unemployment rates upon presidential popularity. Across the board, the primary finding was that inflation had a remarkable impact upon presidential approval ratings. GDP per capita was consistently found to be significant throughout the various tests, but also possessed coefficients that were remarkably low as to be negligible for policy implications relative to inflation. Initial tests rendered unemployment rates to be statistically insignificant, however, further tests revealed it to be significant to a lesser degree with low negative coefficients.

2C. Social Sciences Panel (Smith 107)

1. The Effects of Questioning Voter Integrity on Voter Turnout

Presenter: Avery Cauley

Research Advisor: Dr. Amy Friesenhahn

Political Science, Centenary College of Louisiana

The 2020 election results were put into question by certain political figures, and broadcasted across the United States in various mass media forms. This research will be exploring the effects of putting voter integrity into question on voter turnout. I will be specifically examining the effects of how the 2020 election results were called into question, how this was broadcasted across the United States and if voter turnout has seen a decline since. Prior works have shown that mass media has a negative effect on voter turnout. I argue that calling voter integrity into question leads to voter suppression and that citizens will not vote if they believe there is a chance their vote will not count for various reasons presented in the media. I will look at statistics from state elections where the voter integrity was not in question compared to the state elections where the 2020 voter turnout was put into question.

2. Exploring the Effects of Social Media Activism on Unconventional Youth Political Engagement

Presenter: Channing Hall

Research Advisor: Dr. Amy Friesenhahn

Political Science, Centenary College of Louisiana

This research seeks to understand the causal relationship between increased social media activism and heightened unconventional youth political participation. Protests, internet campaigning, and mutual aid, are all examples of how someone may choose to unconventionally engage with politics. As more avenues for political participation become available, more people begin to desire a break from traditional practices. Young people especially have been shown to be dissatisfied with current government norms. This research evaluates four recent political events that have had a sizable online impact. The similarities between each case are compared to illustrate the effects that social media can have on a political movement

3. Our Bodies, Our Reproductive Rights

Presenter: Julie Barrios

Research Advisor: Dr. Amy Friesenhahn

Political Science, Centenary College of Louisiana

In this paper, I will cover women's reproductive rights, how recently passed legislation affects women's ability to receive healthcare and compare United States women's reproductive rights to Sweden's reproductive rights. This paper will answer the question, "are conservative countries more likely to restrict women's reproductive rights?" In the United States, reproductive rights have been a subject of intense political and legal debate, influenced by diverse factors such as religious beliefs & interpretations of constitutional rights. Sweden has adopted a comprehensive and progressive approach towards reproductive rights, rooted in principles of gender equality and social welfare. Swedish legislation prioritizes individual autonomy & reproductive health. What I expect to find at the beginning of my hypothesis is the correlation between religious communities that have strict laws versus others that do not and how this is affecting women's reproductive rights.

4. Centenary and Slavery: The Presence of African Americans Before, During, and After the Civil War

Presenter: Andrea Kay

Research Advisor: Dr. Jama Grove

History, Centenary College of Louisiana

This project was born to complete the story of Centenary's history. After a visit to our old campus in Jackson, LA, I saw some things that could use an analytical update. This project is significant to Centenary and colleges alike because it brings to life the truths of our past.

2D. Arts and Humanities Oral Presentations (Whited Room)

Moderator: Matthew Blasi

1. The Post-Mortem Glass Ceiling of a Woman

Presenter: Brooke Sandefur

Research Advisor: Dr. Matthew Blasi

English, Centenary College of Louisiana

The story of the Old South is contextually considered as the American 'Other.' It begs the question – what is the line separating the South from the not-south? Is it at the border where jean shorts become daisy dukes? The Mason-Dixon line can't account for the cultural and political differences idealized in southern fiction. The story of women in the realm of southern literature is varied and complex. Discourse surrounding the female role is often subliminally woven into works such as William Faulkner's *As I Lay Dying*, which contains a nuanced portrayal of the female viewpoint that depicts two women navigating oppressive social structures while managing their own personal challenges. In *As I Lay Dying*, Faulkner explores the impact of the regional ideology present in cultural and socio-political barriers surrounding womanhood, and examines generational remnants of these barriers that persist in the modern female experience.

2. A Reclaiming for the Maiden by the Sea: A Critical Reading of "Annabel Lee"

Presenter: Julianna Malloy

Research Advisor: Dr. Matthew Blasi

English, Centenary College of Louisiana

While there are infinitely different analyses of Edgar Allen Poe's work and talents, the majority lack to recognize the patriarchal undertone many of his poems have, whether it be intentional or not. These

glossed over details are reflective of the period in which they were written, and important for readers today to recognize their problematic nature rooted within. This facade is specifically evident in Poe's poem, "Annabel Lee." A closer read will reveal this work holds many underlying issues involving the patriarchy and roots of male possession and power over women. This is done using literary techniques and ideals representative of the period. In "Annabel Lee" the use of imagery and repetition reflects the possession and obsession the speaker feels over Annabel Lee rather than glorification of the love object, reflecting issues women faced during the 19th century and continue to face today.

3. (Don't) Give Up on Your Dreams and Die: A Comic Panel Analysis of The Sandman

Presenter: Kai Young

Research Advisor: Dr. Matthew Blasi

English, Centenary College of Louisiana

In the first volume of Neil Gaiman's *The Sandman*, protagonist and God of dreams Morpheus, also called Dream, escapes from a seventy yearlong imprisonment by a cult. In the chapter "Passengers," Dream has retrieved the last of his sacred treasures stolen by this cult, a ruby called the Dreamstone. The stone is a facet of Dream's power made of solidified dreams. But, despite being one of Dream's own creations, he fails his initial attempt to pick up the ruby. This gives a newly escaped John Dee the opportunity to steal the ruby for himself while Dream is unconscious. While this event serves as buildup to Dream's final confrontation with Dee, it implies a secondary meaning. The scene not only reflects how people are corrupted by the glittering fantasy of their dreams, but also how individualist systems like capitalism create heated, destructive, and alienating competition between those with similar aspirations.

4. Looking out for the Future

Presenter: Aaron Gonzalez

Research Advisor: Dr. Matthew Blasi

English, Centenary College of Louisiana

Lorraine Hansberry's masterpiece, 'A Raisin in the Sun,' serves as the focal point of this paper, offering a fresh interpretation of this gem of American Theatre. Through meticulous close readings, the paper delves into both the significant and insignificant moments within the narrative. At its core, the paper argues that the unwavering determination of the main characters not only drives them to overcome adversity but also heralds the promise of new beginnings such as the pregnancy of Ruth Younger and the prospect of moving the family to a larger house that comfortably allows the family of five to reside.

11-12 Keynote Panel featuring Centenary alumni (Whited Room)

12:45-1:45 SESSION 3

3A. Arts and Humanities Panel (Mickle 114)

Moderator: Jessica Alexander

Medical Takeovers- Doctors and Disease in American History

Research Advisor: Dr. Jama Grove

History, Centenary College of Louisiana

1. Dr. Marion Sims: Medical Trailblazer or Unethical Racist

Presenter - Kiara Liedy

Dr. James Marion Sims is celebrated as a pioneer in the field of gynecology, lauded for his groundbreaking contributions to women's health. However, his legacy is marred by deeply troubling ethical implications stemming from his experimentation on enslaved women in the 19th century. This paper delves into the controversial practices of Dr. Sims, exploring the ethical boundaries crossed in the pursuit of medical progress. Against the backdrop of 19th century America's nascent medical infrastructure, Sims' innovative techniques and their ethical implications are examined. His experiments on enslaved women, conducted without informed consent or anesthesia, raise questions about the intersection of medical progress and moral responsibility. Despite Sims' achievements, his methods highlight the ethical complexities inherent in medical history. Reflecting on Sims' legacy underscores the importance of confronting uncomfortable truths in medical history and striving for ethical progress in the field.

2. Forced Perceptions: The Response to Male Physicians Overtaking Midwives in America

Presenter - Dani Kimmey

In eighteenth-century America, childbirth was considered a completely social affair where the mother was surrounded by her closest friends, family members, and typically a midwife. The friends and relatives would give advice and help ease the mother's fear as the midwife managed the birth and any medical necessities. However, in the nineteenth and early twentieth centuries, there began a very gradual shift towards the involvement of male physicians and hospitals as childbirth began to be viewed as a medical procedure. The shift from birthing rooms to hospitals not only elicited arguments both for and against this change, it also forced a cultural shift in the perception of childbirth. It became a question of morality, status, and control.

3. History of Cholera

Presenter - Jacob Nguyen

In the present times, many diseases like meningococcal disease, strep throat, and even pneumonia are illnesses that doctors and scientists know many facts about. But in the past, there were many diseases that scientists within the United States could not even come to equal conclusions about, letting the deadly diseases plague the newly formed country. A prime example can be cholera, which was a deadly disease that came from an unknown origin. It was not easy for doctors trying to treat cholera, because they did not understand the newly formed disease in front of them. During that time, many of the doctors could not agree on the symptoms, treatment options, or the origin of the disease that was taking the United States by storm. As time continued, many technological advancements have taken place that have made understanding diseases in detail much easier to help the public in facing new illnesses.

3B. Arts and Humanities Panel (Whited Room)

Moderator: Andia Augustin-Billy

Reading Caribbean Gender and Sexuality through Oonya Kempadoo's Buxton Spice

Research Advisor: Dr. Andia Augustin-Billy

Languages, Centenary College of Louisiana

In Caribbean society, aspects of gender and sexuality remain taboo. While scholarship has timidly addressed these topics, creatives have embraced the forbidden by boldly writing about them. Our panel analyzes how one of these authors, Oonya Kempadoo, explores the articulations of gender,

sex, and sexuality through her Guyanese novel, *Buxton Spice* (1999). This novel follows a group of four young girls as they grow into adulthood in their Caribbean village of Tamarind Grove. Kempadoo's novel highlights how coming-of-age girls grow into the taught gendered and sexual expectations of their sex. This panel will discuss the violence and objectification of women, the complex societal constraints on girls, and the fascination with sexuality that comes with adolescence. Our panel hopes to provide a groundwork for understanding Caribbean culture and the intersection of gender, sex, and sexuality for coming-of-age girls.

1. Introduction

Presenter - Victoria Padilla Chavez

2. The Significance of the Buxton Spice Mango Tree

Presenter - Anaiah Lamont

3. The Pervasive Normalization of Violence and Objectification of Women's Bodies

Presenter - Magnus Nielsen

4. Learning Gender: Lula's Observations of the 'Man-Self'

Presenter - Jo Hoffman

2-3:20 SESSION 4

4A. Social Sciences Panel (Mickle 114)

Moderator: Jessica Alexander

1. Women Are Still Facing Social Repercussions for Using Vocal Fry

Presenter: Gracie Napier

Research Advisor: Dr. Jessica Alexander

Psychology, Centenary College of Louisiana

In a 2014 study, Anderson et al. found that listeners more harshly judged women for using vocal fry than men. The current study replicated and extended the previous study by including more naturalistic speech as an additional stimulus set. Six-hundred online participants chose between high and low fry stimuli based on the following characteristics: competence, trustworthiness, willingness to hire, education, and attraction. As expected for each attribute, both male and female fry speech were chosen less often than clear speech. For the Anderson stimuli, there were no differences between male and female speakers, meaning that their original results were not fully replicated. However, for the naturalistic stimuli, listeners were more likely to say that male speakers were more competent, trustworthy, hire-able, educated, and attractive than female speakers using fry. While attitudes toward vocal fry may be less harsh than they were a decade ago, gender differences persist.

2. Word meaning or speaker gender: The effects of semantic and pragmatic violations on memory for sentence-final words

Presenter: Mackenzie G. Williams

Research Advisor: Dr. Jessica Alexander

Psychology, Centenary College of Louisiana

When encountering spoken language, we predict how sentences might end based on what makes sense with preceding words and with broader context. Previous research has shown that memory for expected and unexpected words differs based on the type of linguistic or social context and the level of processing. The present study examines the effects of semantic and pragmatic expectations on recognition memory. Participants read and heard sentences that aligned with semantic or gender expectations and sentences that violated semantic or gender expectations. For semantic trials, participants remembered unexpected words better. For gender trials, participants remembered expected words better. As hypothesized, in both semantic and gendered sentences, false alarms were committed most for expected lure words. Participants had better overall performance on the gendered sentences. The current study compares linguistic and social expectations and demonstrates an interesting difference between the effects of semantic expectation and gender stereotypes on recognition memory.

3. Exploration of How Motivations, Rewards, and Barriers Affect Those Who Volunteer Unpaid Time at Women's Shelters

Presenter: Isabelle Dominguez

Research Advisor: Dr. Michelle Wolkomir

Sociology, Centenary College of Louisiana

Volunteering is a critical societal activity because it often fills needs that are unmet by existing social systems. This exploratory research aims to identify the motivations and patterns that make it likely people will volunteer consistently, as well as barriers to volunteering. To explore these patterns, I conducted 10 loosely structured, in-depth interviews with people who chose to volunteer their unpaid time at a low-income women's shelter. This women's shelter houses women and children who have escaped domestic violence, abusive living circumstances, or those who need support and protection from partner violence. To fully grasp the dynamics, I interviewed each of the volunteers from the shelter. Participants were asked about their feelings, experiences, and thoughts toward volunteering. Data analysis is still ongoing, but initial findings reveal that people volunteer consistently when the activity allows them to help in engaged ways and produces positive feelings. Barriers to being able to help people—like lack of resources or events (COVID)--decrease satisfaction and hurt volunteer efforts. This research may suggest ways organizations can increase rates of volunteering.

4. Racialized Work Experiences on the Blue Line

Presenter: Nyla Pierce

Research Advisor: Dr. Michelle Wolkomir

Sociology, Centenary College of Louisiana

In today's society, it appears that many either respect or resent police officers, particularly in light of instances of police brutality. Movements such as Black Lives Matter have drawn further attention to such issues and urged political reform, while movements such as Blue Lives Matter have presented a counter social narrative of police as endangered. Much less attention has focused on what it is like emotionally to engage in police work under such contested and tense circumstances. This study aims to explore how black and white patrol officers experience their work through a racialized lens. To begin to examine these experiences, I conducted in-depth, loosely structured interviews with 12 male patrol officers to allow them to fully explain their experiences. The sample was designed to recruit black and white officers, specifically to explore racialized perspectives. Using analytic induction, this

ongoing research will examine the emotional and psychological stresses of policing under these conditions, paying close attention to how racial identities may influence experiences.

4B. Arts and Humanities Oral Presentations (Whited Room)

Moderator: Matthew Blasi

1. The Id and Transformative Trauma in Poe's "The Black Cat"

Presenter: Michael Micinski

Research Advisor: Dr. Matthew Blasi

English, Centenary College of Louisiana

Edgar Allan Poe's "The Black Cat" is a significant work within the realm of American Gothic literature for its atmosphere, tone, and supernatural elements. The tale is a recounting, by a narrator, of a series of seemingly ordinary events which lead to his mutilating and killing of a pet and the killing of his wife. With the inclusions of trauma, domestic violence, and contributing factors such as alcoholism, it is easy to see why much work has gone into the psychoanalysis of this story. This presentation will focus on the story's depiction of the Freudian concept of the id and its effects on the narrator. Through its depictions of the destructive influence of the id and of its horrifying aftermath, "The Black Cat" emphasizes the importance of guarding oneself against the id so as to not be negatively transformed by traumatic events.

2. Psychoanalysis and The Flowers

Presenter: Kaleb Atkinson

Research Advisor: Dr. Matthew Blasi

English, Centenary College of Louisiana

Alice Walker, born 1944, is a novelist, poet, and writer of short stories. She grew up in a period where segregation remained legal, and as such her work focuses on the struggles African Americans face. Her flash fiction piece, "The Flowers," features a young African American girl, Myop, who is traversing through the woods. This physical adventure seems to symbolize her journey from the Imaginary Order to the Symbolic Order, which are key components of Lacanian Psychoanalysis. However, this is peculiar because Myop is far past the point at which this transition should naturally occur. It seems as if Myop has traversed back into the Imaginary Order, which is not possible according to Lacan's theory. This presentation attempts to explain Myop's unusual interaction with the Imaginary Order via a Lacanian Psychoanalytic reading of the text, a return to Freudian Psychoanalysis, and an examination of the effects of violence on children.

3. A Psychoanalytic Evaluation of "Sonny's Blues" by James Baldwin

Presenter: Riley Keene

Research Advisor: Dr. Matthew Blasi

English, Centenary College of Louisiana

"Sonny's Blues" by James Baldwin focuses on two brothers: the older unnamed narrator and younger Sonny. The narrator seems to have everything together. He is married with children, has a steady job, and is able to provide and care for his family. In contrast, Sonny is an aspiring musician who has a history of drug addiction. On the surface, there is a clear distinction between the two brothers and what their roles are in each other's lives: the narrator, being the big brother, cares for and tries to help his reckless younger brother. However, by viewing the relationship between the narrator and Sonny through and psychoanalytic lens, the differences between the two brothers can be revealed as

running much deeper than just familial roles. In "Sonny's Blues," Sonny's escape from the Real with drugs and music causes discord within the narrator due to his battles with his unconscious, revealing how different life experiences and mindsets can create unconscious tension between human beings.

4. A Psychoanalytic Reading of Mirror by Sylvia Plath

Presenter: Braydon Gaston

Research Advisor: Dr. Matthew Blasi

English, Centenary College of Louisiana

This paper is about what reading the poem, Mirror, by Sylvia Plath from the perspectives of Freudian and Lacanian psychoanalysis can tell us about the experiences of people and specifically women in a world where identity is fragmented by modernity and postmodernity and also possibly what to do about it.

4C. Arts and Humanities Oral Presentations (Kilpatrick)

Moderator: Mandi Donahoe

Media Made America: The Consequences of Public Perception

Research Advisor: Dr. Jama Grove

History, Centenary College of Louisiana

1. The Violent Fireman: Media Depictions and Public Opinion of Firefighters in Nineteenth and Twentieth Century America

Presenter: Dani Kimmey

Within American cities, there are two major municipal services that receive most of the city's attention. However, the reactions to these services are on two completely opposite sides. The police currently have a negative reputation while firefighters are, to put it simply, beloved, but this has not always been the case. The public opinion of firefighters has cycled as negative and positive depictions appeared in media and public discourse. How have firefighters been depicted, and how does that relate to the general belief in the fire department services?

2. Women v. The Media

Presenter: Sydney Welch

Throughout history media outlets have used their influence to sway the outcome of many different criminal cases. This is especially true when the defendant is a woman. This research project will take a deeper dive into this notion and explore the scary power that the media holds when deciding our fate. This project covers the case of Lizzie Borden in 1892, the murder of Lucy Pollard in 1895, and the Laurie Bembenek case in 1981.

3. God, Country, and Monkeys

Presenter: Magnus Nielsen

The American Bible Belt and, by extension the Christian fundamentalist movement, have been greatly affected by the economic, racial, and cultural evolution of the times, yet it was surprising how the Fundamentalist movement was inherently defined by these factors. The discourse of Christian fundamentalism during the early 20th century is muddled by the showmanship of the era as seen in the Scopes Monkey Trial, which dominates the contemporary perception of the early fundamentalist movement. This paper will investigate some of the factors that influenced the Christian

fundamentalist movement, and how the fundamentalist movement was not merely affected by the economics of the time, but an extension of it.

3:30-4:30 SESSION 5

5A. Arts and Humanities Oral Presentations (Whited Room)

Moderator: Chrissy Martin

1. To Cuckold a God: How Chaucer uses "The Merchant's Tale" to Ridicule the Emerging Middle Class

Presenter: Jo Hoffman

Research Advisor: Dr. L. Belle Jones-Pierce¹ & Dr. Aisling Reid²

¹English, Centenary College of Louisiana

²Research Fellow, School of Arts English and Languages, Queen's University Belfast

Geoffrey Chaucer's *The Canterbury Tales* critiques the role of women, the emerging middle class, and the role of divine intervention in human lives with an emphasis on respecting the divine social order. "The Merchant's Tale," a tale of a young wife cuckolding an old knight narrated by the merchant character, uses astrology to equate the lives of gods with the lives of their human playthings. Chaucer uses the Merchant's Tale to ridicule the teller's understanding of estate. By making Pluto, a god, parallel the men in the Tale, the merchant ignores the divine social order of fourteenth-century England, thus indicating an estrangement of the nouveau riche from proper social etiquette. After gaining an understanding of Chaucer's medieval biases and how he uses astrology to make social critiques in his Tales, this essay will analyze how 'The Merchant's Tale' paints the merchant character as unreliable and unattuned to societal expectations.

2. Mechanical Viscera

Presenter: Jae Tuggle

Research Advisor: Dr. Matthew Blasi

English, Centenary College of Louisiana

A human-sent robot is tasked to retrieve an artifact from a barren wasteland. The machine finds the artifact, however it encounters another robot and their conflicting tasks lead to a one-sided attack. Our narrator consumes the robot piece by piece. It checks the artifact once the feeding is done only to find it is not exactly what it is looking for. It consumes the failure and continues on trying to find what it was sent to retrieve.

3. Art and Inspiration

Presenter: Karisma S. Cooper

English, Centenary College of Louisiana

I will be reading aloud 2 poems of mine, all of which are sort of abstract with deeper meanings. Some might have to solve these poems like one would solve a riddle or a puzzle. I will be breaking down the general meaning of my work and my writing process. I will also be speaking on how one can find inspiration as a writer.

5B. Arts and Humanities Oral Presentations (Kilpatrick)

Moderator: Mandi Donahoe

Southern Womanhood and Politics

Research Advisor: Dr. Jama Grove

History, Centenary College of Louisiana

1. Homefront to Klavern

Presenter: Jordan Hall

My research paper will analyze the different domestic roles American women played in World War I and connect it to the parts white women post-WW1 played in the second wave of the KKK. Within this examination, it will also be observed the difference in society for women pre-, during, and post- WW1, as well as how the role of women in the KKK evolved from the 1st wave to the 2nd.

2. Suffrage in the South

Presenter: Debbie Brown

This project looks at the relationship between the Lost Cause and women's suffrage in the American South. Although often examined separately, Tennessee, the final state required to secure passage, demonstrates that these two forms of women's activism were actually linked.

3. Apolitical Politics: Women's Influence on American Society

Presenter: Madi McCrary

Women have long held a role in American politics. To achieve their goals, many have worked within the church as an avenue of advancement. White women have long been recognized for their work within the church to advocate for women's rights. The work of black women within the church has been understudied, even though, in many ways, their work was much more extensive. My project is a comparison between the work of black and white women within the church to advance their political goals.

4:40-5:40 SESSION 6

6A. Creative Writing Performances (Whited Room)

Moderator: Chrissy Martin

1. Audrey M. Smith Endowed Poetry Award Finalists:

- Aaliyah Vines - "Ode to a Scuppernong Bush"
- Megan McHugh - "Raid, I Cherish You"
- Kaleb Atkinson - "Self Portrait as a Neutron Star"

2. Zeak Monroe Buckner Writing Award Finalists:

- Siobhan Stanley - "If I'm Being Honest on Hinge"
- Hayden Cagle - "I Wish I Could Waltz Across the Sky"
- Emma Greer - "Pupa"

6B. Arts and Humanities Oral Presentations (Kilpatrick)

Moderator: Jama Grove

Segregation, Incorporation, or Assimilation: Inclusion and Exclusion in the United States

Research Advisor: Dr. Jama Grove

1. Waves of Irish Immigration and Assimilation during the Turn of the Century

Presenter: Reilly Dymond

This presentation will explore the second wave of Irish immigration that occurred during the 1880's - 1920's, and how the first wave of Irish immigrants, who had established themselves through positions of authority in America, aided in the assimilation of that second wave.

2. Shabbat in Shreveport: A Case Study of Southern Jewish History

Presenter: Beth Vogler

Throughout American and Southern history, Jewish communities have established and developed themselves within the South, creating a vibrant and multilayered history. Through this history, general trends in demographics and historical fact present themselves. Shreveport, Louisiana provides a fascinating case study into how these trends apply, or do not apply, to a specific community.

3. Redlines and Black Communities in the Urban South

Presenter: Andrea Kay

The Home Owners Loan Corporation maps (HOLC) redlined minority communities across the country, but much of the research on the long-term effects of redlining have focused on the cities that received Black families leaving the South. This project will compare the effects detailed in other, Northern cities to our city of Shreveport.

American History Oral Presentations (Smith)

Moderator and Research Advisor: Jama Grove

These panels will follow their own time schedule with a break for the Keynote Panel at 11 and lunch from 12-12:45.

Panel 1: American Music History

1. Elvis Presley and his Impact on American Music

Presenter: Elizabeth Canady

In my project, I am covering how Elvis's personality created a foundation for today's music industry. This was the first steppingstone for the music world incorporating blacks and whites regardless of the laws that were implemented at the time.

2. Modern Influences of Jazz Music

Presenter: Stan Melton

I will discuss the emergence of Jazz and its history, through the early 21st century. This presentation will also look at the influences of jazz in modern music and musical movements throughout this time period.

3. Tupac Shakur

Presenter: Rubin Seastrunk

4. The power of Artistic Expression: What Hip Hop did for Black Americans

Presenter: Devon Strickland

My topic is going to be about how hip hop music more specifically by Tupac had an impact on society. I'll explain how and why the songs he created made him such a symbol for black Americans.

Panel 2: All Power to the People: Examining Civil Rights and Black Power

1. Speed and Struggle: Jesse Owens Against Racial Adversity

Presenter: Emmanuel Walker-Hines

It is about the racial injustices Jesse Owens endured as an African American Olympic sprinter. It is also about how he endured these injustices.

2. Martin Luther King Jr.'s "I Have a Dream" speech and "Letter from a Birmingham Jail"

Presenter: Isaiah King

This presentation will analyze and compare the origins and influence of Dr. King's "I Have a Dream" speech and "Letter from a Birmingham Jail," including how his daughter had asked him why she could not go to an amusement park because of her race.

3. Influential African American Women in the Black Power Movement

Presenter: Yadneli Molina-Maldonado

African American Women during the Black power movement were influential and powerful, but do you know what woman was behind Malcolm X or even Martin Luther King Jr.? This presentation is about the women behind the scenes who worked side by side with these men.

4. Beyond the "Militant:" Black Community Uplift

Presenter: Gerald Murage

Huey P. Newton's Multifaceted Approach to Empowerment and Liberation delves into the dynamic strategies employed by the iconic civil rights leader within the Black Panther Party. This research project explores how Newton's philosophy extended beyond armed resistance to include community-based initiatives such as free breakfast programs, healthcare clinics, and educational outreach.

5. Beyond the Bullet: Examining Fred Hampton's Legacy and the Chicago Black Panther Party's Impact

Presenter: Bakari Nelson

During the late 1960s Fred Hampton, a dynamic activist and leader, was a key figure in the development of the Chicago Black Panther Movement. Through political activity, social initiatives, and education, he worked to empower vulnerable communities and confront systemic injustices including racism and police brutality. This study explores Hampton's dynamic leadership style, the Chicago Black Panther Party's organizational strategies, and their long-lasting influence on social justice activism and civil rights movements.

Panel 3: Education, Ideology, and Americanism

1. Education as Colonialism

Presenter: Dominick Strickland

My topic is about the US and its history of trying to "educate child races". For example when the US indoctrinated the Native Americans and forced them into schools to become "civilized" or when, during American Imperialism of the Pacific, we tried to force Protestant Christianity onto a country previously controlled by Catholic Spain.

2. History of Education in Louisiana

Presenter: Adriauna Wade

Louisiana's ranking in education is 46 out of 50 states. The purpose of my presentation is to evaluate the history of our education system. This will look at the ways in which "No Child Left Behind" was actually a hinderance to people's educational needs, the lack of testing for learning disabilities, and the lack of food resources in many Title I schools.

3. How Hazing Fuels White Masculinity

Presenter: Mavy Gigante

Historically, hazing has been imposed unto new members of organizations or societies as a means to indoctrinate and solidify membership; hazing rituals typically involve humiliation, endangerment, and physical, mental, psychological abuse put upon new members as a "rite of passage." In American history, hazing rituals amongst fraternities increased after Civil War veterans brought back hazing practices they learned during their time fighting in battalions. Hazing provided these men a way to prove their masculinity which permeates through Greek Life today; moreover, the men in these fraternities come from lines of privileged social status that has allowed them to envelope their power through different sectors of government and business even today.

4. The Origins of Modern Business Practice

Presenter: Carl Lind

My research looks at how Andrew Carnegie and John D. Rockefeller had two different companies in different products and how they both basically created a monopoly but how Carnegie did it correctly and legally while Rockefeller became a millionaire by overtaking every company that was using oil as a product. I will also be explaining how Rockefeller was the person that was known for the monopoly laws in the U.S. and how they would affect the economy today in good ways. Also explaining how Carnegie and Rockefeller started their businesses.

Panel 4: Law and Order (?): Americans and the Law in the 20th Century

1. The Game Changer - Jackie Robinson

Presenter: Carter Webb

This will be the story of Jackie Robinson's impact. Robinson was an important aspect of the change for sports. He was the factor that allowed African Americans to be able to play baseball and many other sports.

2. How Federal Policies have Affected the Growth of Entrepreneurship in Modern America

Presenter: David Carrillo Marquez

In my presentation I plan to discuss the significance of federal policies when it comes to the growth of the entrepreneur industry in the US. I will do this by analyzing various policies and aspects that have potentially helped grow or slow down the entrepreneur industry.

3. The Rights of Married Women: Exploring the Withdrawal of the Marital Rape Exemption

Presenter: Marina Rodriguez

Prior to 1993, North Carolina and Oklahoma retained legal codes that maintained an exclusion for rape if the man and the woman were married. This research will look at the repeal of those laws, which meant that, for the first time in US history, the law recognized that sex without consent was rape.

4. Mobsters: Were they really the "Goodfellas"?

Presenter: Andrew Landry

This project will compare the representation of mobsters in American society to the accurate historical events. I plan to focus on the movie "Goodfellas," the adaptation from Martin Scorsese, and the actual events reported, including information in the FBI files online.

5. Women's Suffrage in the Progressive Era

Presenter: Riley Myers

This research examines how issues that women had in the Progressive Era, like health services and education, led to the right to vote by women. These issues could only be influenced through informal politics before the 19th amendment.

Panel 5: US and the World

1. Jackie Robinson Changing Sports and the way of the World

Presenter: Brandon Newton

I am going to take a deep dive into actually how Jackie Robinson changed the color barrier in professional baseball and other professional sports. I am also going to talk about how that has helped us get equality in our society and how we can look at Jackie and better help the equality in our country today.

2. How Governmental Control From WWII- Affected Quality of Goods and Safety of Citizens

Presenter: William Riley

I plan on explaining how communism and the business practices surrounding production of goods can have a tangible effect on safety of people. In times of the cold war, and within fascist Germany around WWII people's safety was endangered more by the government.

3. Economic Incentives Behind Ingredient Replacement by Coca Cola

Presenter: William Harris

This paper will dive into the curious switch by Coca Cola from using cane sugar to using high fructose corn syrup in their products in the US. It will detail the economic incentive and government programs which rewarded companies for utilizing ingredients derived from corn in their products after World War II.

4. The Flip of Tides from the Boots on the Ground; Battle of the Bulge

Presenter: Jacob Ramsey

This presentation will be about how the battle of the bulge was influenced by America and how it was the turning point of WWII. The reason for it was that it was German's last offensive. When the Americans pushed them out of France, they were on the defense the rest of the war. This research relies on the first-hand experience of lieutenant and some of the sites saw and what happened during his expedition in France and what happened during it.

5. Integration, Practices, and the Economy on the Homefront during the Second World War

Presenter: Bryce Bienvenu

I will discuss the workplace on the American homefront during World War II. Specifically, the integration of African Americans into the workplace, the emergence of new business practices, and how the economy was impacted as a whole.

Poster Presentations (Mickle 2nd floor) – 2:30-4:30 pm

Moderator: Scott Chirhart

1. HCMV-Induced Signaling Upregulates Translation of Stx6 in Primary Human Monocytes

Presenter: Madison McKnight⁶

Research Advisor: George Tiller⁵, Katherine Weeks⁵, Victoria D. Filloon^{1,2,3}, Bailey S. Mosher^{1,2,3,4}, Elizabeth Klotzbach¹, and Andrew D. Yurochko^{1,2,3,4}

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⁵ *Biology, Centenary College of Louisiana*

⁶ *Pathogen-Host Interactions and Immunology Research and Education (PHIIRE) Program, LSUHLS, LA*
Human Cytomegalovirus (HCMV) is a betaherpesvirus with a worldwide seroprevalence of 60-90%. It is the primary infectious cause of viral congenital birth defects and is associated with increased morbidity and mortality in immunocompromised individuals. To achieve hematogenous dissemination and life-long persistence, HCMV must productively infect peripheral blood monocytes by successful nuclear translocation. Viral entry and nuclear translocation in monocytes rely on the signaling pathways activated by the binding of viral glycoproteins gB and gL/gH/UL128-131

(pentamer) to EGFR and $\beta 1/\beta 3$ integrins, respectively. The specific receptor-ligand interactions result in a unique retrograde-like trafficking pattern to the monocyte nucleus. We have previously identified that to facilitate the transport of the virus from early endosomes to the trans-Golgi network (TGN) for nuclear trafficking, HCMV utilizes Syntaxin 6 (Stx6), a SNARE protein associated with vesicle fusion and retrograde trafficking. In this study, we investigated how HCMV-induced signaling regulates Stx6 during infection in primary human monocytes. We discovered that cells infected by HCMV lacking the pentamer complex do not upregulate Stx6 protein levels as opposed to cells infected by pentamer-containing virus. This principle suggests that pentamer/integrin-induced signaling is likely essential to Stx6 protein upregulation. We further observed that HCMV infection activates Syntaxin family and translational regulators downstream of virus-induced signaling events, such as CK2 and p70 S6 kinase, to initiate the translation of Stx6 transcripts. We argue that Stx6 protein levels are regulated by HCMV-induced signaling events to promote viral trafficking and nuclear translocation in primary human monocytes.

2. Functional Characterization of Novel lncRNA in Arabidopsis thaliana

Presenter: Tarif Islam

Research Advisor: Dr. Rebecca Murphy

Biology, Centenary College of Louisiana

Long non-coding RNA (lncRNA) are composed of 200 or more nucleotides, and unlike mRNA, they do not translate proteins. Instead, they have other ways to regulate gene expression including being a transcriptional enhancer or repressor, forming a scaffold, and splicing. This project served to explore the role that lncRNA may play in regulating protein coding genes by characterizing the phenotypes of Arabidopsis thaliana with mutations in a set of high confidence lncRNA identified as antisense or adjacent to the protein coding gene through previous transcriptome analyses.

3. The Role of Stem Cells and Angiotensin Converting Enzyme 2 in Novel Ischemic Stroke Therapy

Presenter: Anacelia Galeano-Balam

Research Advisor: J. Steven Alexander

Department of Molecular & Cellular Physiology, Louisiana State University Health Sciences Center (Mentor/PI in summer program for this presentation)

Ischemic stroke is a leading cause of neurologically based morbidity and long-term disability. Caused by blood clots, ischemic stroke leads to a lack of oxygen and nutrients to the brain, leading to permanent brain damage or death. While most treatments for stroke are effective at removing blockages, they have little effect on preventing damage that the brain's vasculature endures when perfusion is resumed, also known as ischemic reperfusion injury (IRI). Angiotensin Converting Enzyme 2 (ACE2) has been shown to mediate vascular protection in the stroke model by ACE2 product activation of the MasR pathway. We hypothesized that hPMSC (human placental mesenchymal stem cells) are an effective method for ischemic stroke therapy by promoting either increased production of ACE-2 in the brain or increasing ACE2 delivery to the brain or both. Our lab found that extracellular vesicles promote the production of ACE2 rather than bring ACE2 into the brain itself.

4. The use of diverse anatomical models increases Black students feeling of belonging and motivation in STEM Classrooms

Presenter: Alexa Hinojosa, Anacelia Galeano-Balam, and Jennifer Saldana

Research Advisor: Anna Leal and Peter Zunick

Biology;Psychology, Centenary College of Louisiana

The purpose of this study was to test if use of anatomical models with different skin tones affects students' feelings of belonging, self-efficacy, affect, and motivation in STEM classes. Subjects were lower-level Biology and Psychology undergraduate students. Each study had a random selection if White or Black model would be used. Before and after a learning activity, participants completed a questionnaire reflecting on their feelings of belonging, self-efficacy, affect, and motivation in STEM classes. The activity consisted of learning structures within the model. After the participants individually completed an anatomy quiz over the structures they just learned. Finally, participants were debriefed. Results showed change in belonging and motivation when Black students used Black-skin-toned model. Similar patterns present for self-efficacy, affect but did not reach statistical significance. At last, this research shows how the use of diverse anatomical models can increase belonging and motivation for Black students in STEM learning environments.

5. A Sleep and Self-Care Study: Do college students prioritize their health?

Presenter: Brennan Amato, Kyra Stokes, Ana De La Fuente, Madison Davis

Research Advisor: Jessica Alexander

Kinesiology, Centenary College of Louisiana

College students routinely neglect their sleep and self-care. We created a survey to investigate multiple aspects of health. This project considered responses related to the sleep and self-care of Centenary students. The survey consisted first of confirmation of participation consent, then questions concerning participant demographics and general health. Following this portion was the KAP survey which contained a knowledge, attitude, and practice section. The knowledge section asked a series of questions to understand what participants comprehended regarding their sleep and self-care health behaviors, and how it affects their lifestyle. The section about attitude discussed the participants beliefs and feelings toward important health behaviors. The practice section consisted of statements to analyze their actual behaviors.

6. Determining the knowledge, attitudes and practice that drug usage has on college students.

Presenter: Shawn Dawson & Trent Smith

Research Advisor: Dr. Jessica Alexander

Kinesiology, Centenary College of Louisiana

In this study, our goal was to investigate what role drug use plays in the day-to-day lives of college students. We created a survey with various questions revolving around 3 key concepts: attitudes, practice, and knowledge of drug use. To determine how frequently students use drugs, we asked if they used drugs based on stressful situations, or for recreational purposes. The subjects of this study were college students with diverse backgrounds and sports affiliations across Centenary College campus. We will consider how drugs and alcohol could negatively impact students' well-being while involved in sports or academics.

7. The Beauty of Health and Fitness: Knowledge, Attitudes, and Practice of Physical Activity

Presenter: Tanner Hooker, Kyron Williams, Alexis Roach

Research Advisor: Dr. Jessica Alexander

Kinesiology, Centenary College of Louisiana

What role does physical activity play in college student's lives? This study examines college student's knowledge, behavior, attitudes, and practices toward physical activity in their everyday lives. We created a health survey for students at Centenary College of Louisiana that consisted of informed

consent, general questions, and health demographics. The practice section included questions about your activities regarding health behaviors. The attitude section included questions about beliefs and values toward health behaviors. The knowledge section was questions about understanding health behaviors. We are interested in examining the way students engage in physical activity for health and demographics.

8. Pitching with Physics

Presenter: Royce Congi

Research Advisor: David Kordahl

Physics, Centenary College of Louisiana

Baseball pitchers are critically interested in controlling how the baseball moves. Whether a fastball or curveball is thrown, there is a need for the pitch to move in different ways to keep opponents on their toes. The physics of this is largely based on the Magnus force. The Magnus force depends on the spin of an object, which causes the object to deviate from a straight line. To demonstrate this phenomenon, both real and simulated examples are presented. The real data comes from the Trackman system as applied to pitching on the field. The simulated example comes from a simulated trajectory of a baseball, using computer code. The simulation is able to capture the observed dynamics reasonably well.

9. Modelling The Wilberforce Pendulum and Coupled Oscillations

Presenter: Emma Foster

Research Advisor: Dr. Kordahl

Physics, Centenary College of Louisiana

The Wilberforce Pendulum is a pendulum that demonstrates coupled oscillations through a mass on a spring. The mass has both vertical oscillations as well as rotational oscillations, which are coupled, meaning that the vertical and rotational oscillations influence each other. The system can be described using equations pertaining to the vertical motion and the rotational motion. By using the equations of motion for the pendulum and coding it on Python, the parameters that describe the system have been characterized.

10. Refining Influential Factors on the Trajectory of a Soccer Ball

Presenter: Dylan Allred

Research Advisor: Dr. Kordahl

Physics, Centenary College of Louisiana

When a soccer ball is struck, its trajectory is mainly determined by the gravitational force, the drag force, and the magnus force. These forces encapsulate components such as the ball's mass, spin rate, cross sectional area, and density of the air. A series of differential equations were used to calculate these forces and provide a framework to run simulations. These simulations capture different techniques of striking the ball resulting in unique combinations of forces. A computer program was written to model how changes in these forces impact the flight of a soccer ball, and the simulation results were compared to real life freekick data.

11. Mechanics of the Three-Body Problem

Presenter: Jackson Spataro

Research Advisor: David Kordahl

Physics, Centenary College of Louisiana

The three-body problem is a longstanding problem in gravitational physics. It can be studied by writing code to simulate the gravitational forces among the three aforementioned bodies. We briefly present results from different versions of the problem: a system similar to that of our sun, the moon, and the Earth; a system with nearly-periodic repetitions; and a system with chaotic dynamics. We discuss the complications involved in solving this problem and suggest potentially new approaches with which one could approach such systems within future studies.

12. The Magmatic Evolution of two Central Snake River Plain Basaltic Flows

Presenter: Austyn Benoit & Monica Percino

Research Advisor: Scott Vetter

Geology, Centenary College of Louisiana

The aim of this study is to evaluate the magmatic evolution of two Central Snake River (CSRP) lava flows (Notch Butte and Flattop Butte). Based on field observations the flows are small monogenetic lava flows and the estimated ages of Flattop Butte flow is over a million years old and Notch Butte flow less than a million years old. The Snake River Plain (SRP) is an elongated physiographic province that extends from southwest Idaho and culminates at the Yellowstone Plateau in western Wyoming. The Snake River Plain represents the surface impression of a hotspot interacting with the North American continent, resulting in a series of time progressive eruptive sites along the Snake River Plain. The samples were analyzed for whole rock major and trace elements and mineral phase chemistry. Whole rock compositions were done by electron microprobe analysis (EMPA) and inductively coupled plasma mass spectrometry (ICP-MS). Phase chemistries were done by scanning electron microprobe analysis (SEM). Results of major element analysis show ranges for Notch Butte wt % SiO₂= 47.5-46; wt % TiO₂= 3.4-2.1; wt % MgO= 8.4-7; wt % FeO= 14.9-12.2. Flattop Butte ranges wt % SiO₂= 47.2-46.2; wt % TiO₂= 3.6-3.4; wt % MgO= 6.6-6.2; wt % FeO= 15.9-15. Norm calculations resulted in the samples being olivine normative. Trace element concentrations indicate that all samples are light rare earth enriched with no Eu negative anomaly. Based on whole rock chemistry Flattop Butte samples are more evolved than Notch Butte samples. All samples contain both olivine and plagioclase phenocrysts set in a groundmass of olivines, plagioclase, clinopyroxenes, and oxides that consist of ilmenites and magnetites. Some olivines show spinel inclusions. Flattop Butte reveals phases of olivines ranging from forsterite %= 75.4-52.3 and plagioclase ranging from anorthite %= 67.9-43.7. Notch Butte had olivines of forsterite %= 83.2-67.9 and plagioclase of anorthite %= 72.9-52.6. Initial modeling shows an intraflow variation consistent with fractional crystallization of observed phenocrysts. Interflow variations are not consistent with simple fractional crystallization of observed phenocrysts. Initial modeling of interflow variation suggests an assimilation-fractional crystallization (AFC) may have resulted in the observed chemistry of these flows.

13. Paradoxical regulation of cellular redox homeostasis by hydropersulfides and hydropolysulfides via Cystathionine γ -lyase phosphorylation

Presenter: Cameron R. Cason

Research Advisor: Xingguo Shen, Gopi K. Kolluru, and Christopher G. Kevil

Department of Pathology, LSU Health Sciences Center, Shreveport, LA, USA

The DNA damage response (DDR) is critical for maintaining genomic stability. Recent evidence suggests the key proteins that coordinate the DDR, ataxia telangiectasia mutated (ATM) and ataxia telangiectasia and Rad3-related (ATR) protein kinases, exhibit crosstalk with hydrogen sulfide (H₂S) signaling. Metabolites of this endogenous gasotransmitter, hydropersulfides (R-SSH) and hydropolysulfides (R-SSnH), have recently emerged as crucial regulators that serve to maintain

cellular redox homeostasis. The dual oxidant and antioxidant properties of these sulfane sulfur compounds allow them to regulate the redox state of cells and counter oxidative stress. One of the major H₂S-synthesizing enzymes, cystathionine γ -lyase (CSE), has shown considerable involvement in the production of per-polysulfides under acute hypoxic conditions. This study aims to evaluate the effects that CSE activity elicits on the DDR after exposure to ultraviolet light, particularly as it pertains to the formation of sulfane sulfur species.

14. Mapping the Interactions of CST and BRCA1-BARD1 in DNA Resection

Presenter: Haley Bordelon

Research Advisor: Dr. Patrick Sung, UT Health Science Center San Antonio

The efficient repair of DNA double-strand breaks (DSBs) is crucial to maintain genome stability, and deficiencies in a number of DNA repair factors, such as the BRCA1-BARD1 tumor suppressor complex, is associated with the development of numerous cancers, namely breast and ovarian cancer. DSB repair occurs through two competing pathways, namely homologous recombination (HR) and nonhomologous end joining (NHEJ). The committal step of HR, promoted by BRCA1-BARD1, involves the extensive resection of the broken DNA end to prepare a proper substrate for subsequent HR steps. The Sung laboratory has determined a novel role for the trimeric CST complex, initially associated with telomere maintenance, to block EXO1 nuclease activity. EXO1 is the predominant exonuclease responsible for DNA resection which facilitates DNA strand invasion and subsequent repair by HR. By blocking EXO1 activity, CST promotes DSB repair by NHEJ. Recent data suggest BRCA1-BARD1 interacts with CST and EXO1 to alleviate a CST-imposed block of EXO1, thereby promoting DNA end resection.

April is National Poetry Month, and April 18th is Poem in Your Pocket Day, a daylong celebration of poetry. Since it coincides with our Research Conference this year, we are including this poem by Centenary student, Eva Vega, in your program. This poem comes from the forthcoming Spring 2024 issue of *Pandora*. Enjoy!

J. Doe

I must apologize.
How violated you must feel
when I touch your appendages,
caress your tuberosities,
memorize every dent and divot
of your remaining curves.

You had a life once.
Vibrant and full of complex
experiences I will never know.

Yet you continue to sacrifice
your peace for my knowledge.
For that, I am grateful
because one day,
in the battle against death,
you will be my strongest weapon.

Eva Vega
Class of 2024