

**Honors Council of the Illinois Region
Student Symposium
February 26, 2022
9:00 am - 3:15 pm**

Hosted by the College of DuPage Honors Program

Session	Zoom Room	Moderator
<p>9:00-9:25 am Welcome!</p> <p>President Brian Caputo's welcome video: https://drive.google.com/file/d/1ZLxgsZyTM2E6ZuOzgbSY4RWXO8dg1rIt/view</p> <p>Padlet Link for all Posters: https://padlet.com/higgins19/est47y-mozrypicjo</p> <p>The Virtual Headquarters will remain open throughout the symposium if you have any questions/issues.</p>	<p>Virtual Headquarters https://cod.zoom.us/j/81328981591</p>	<p>Dr. Les Wolf College of DuPage</p>
<p>9:25-9:55 am Icebreaker! Breakout rooms by majors</p>	<p>Virtual Headquarters https://cod.zoom.us/j/81328981591</p>	<p>Hosted by the Honors Student Advisory Committee and Phi Theta Kappa</p>

9:55-10:00 am: Break/set-up for next session		
Session 1 10:00-10:55 am	Zoom Room	Moderator
Option 1: Research on Learning and Love	https://cod.zoom.us/j/86141491819 Dr. Lisa Higgins	Dr. Lisa Higgins College of DuPage
Option 2: Issues in Education, Part I	https://cod.zoom.us/j/84584009232 Destiny Belzey	Dr. James Allen College of DuPage
Option 3: Business in the Time of Covid	https://cod.zoom.us/j/85635292261 Britney Nakhammouane	Dr. Jon Hageman Northeastern Illinois University
Option 4: Scientific Inquiry, Part I	https://cod.zoom.us/j/89913581355 Dr. Nicole Matos	Prof. Lynda Randa College of DuPage
Option 5: Fashion and Finance	https://cod.zoom.us/j/81536818492 Prof. Eva Stevens	Prof. Eva Stevens College of DuPage
10:55-11:00 am: Break/set-up for next session		

Session 2 11:00-11:55 am	Zoom Room	Moderator
Option 1: We're Made By History	https://cod.zoom.us/j/86141491819 Dr. Lisa Higgins	Dr. Maria Ritzema College of DuPage
Option 2: Child and Animal Welfare	https://cod.zoom.us/j/84584009232 Destiny Belzey	Prof. Ken Orenic College of DuPage
Option 3: Diving into the Literary Arts	https://cod.zoom.us/j/85635292261 Britney Nakhammouane	Dr. Jennifer Conary DePaul University
Option 4: Innovations in Health Care	https://cod.zoom.us/j/89913581355 Dr. Nicole Matos	Dr. Nicole Matos College of DuPage
Option 5: Coping Through Creativity	https://cod.zoom.us/j/81313494192 Prof. Trina Sotira	Prof. Trina Sotirakopulos College of DuPage
<p>12:00-12:30 pm: Lunch</p> <p>12:30-12:55 pm: Drawing with Prizes! Enter your name in a drawing for fun prizes! Hosted by the Honors Student Advisory Committee and Phi Theta Kappa Virtual Headquarters Zoom Link: https://cod.zoom.us/j/81328981591</p>		

Session 3 1:00-1:55 pm	Zoom Room	Moderator
Option 1: Violence Against and By Women	https://cod.zoom.us/j/86141491819 Dr. Lisa Higgins	Dr. Lisa Higgins College of DuPage
Option 2: National Solutions to the High Costs of Infrastructure and Higher Education	https://cod.zoom.us/j/84584009232 Destiny Belzey	Destiny Belzey College of DuPage
Option 3:	https://cod.zoom.us/j/85635292261	Prof. Jim Bradley
Scientific Inquiry, Part II (Plus DINOSAURS!)	Britney Nakhammouane	College of DuPage
Option 4: Problematizing Ethics	https://cod.zoom.us/j/89913581355 Dr. Nicole Matos	Dr. Nicole Matos College of DuPage
Option 5: Our Bodies, Our Health	https://cod.zoom.us/j/5100702442 Prof. Christine Kickels	Prof. Christine Kickels College of DuPage
1:55-2:00 pm: Break/set-up for next session		

Session 4 2:00-2:55 pm	Zoom Room	Moderator
Option 1: Fighting For Our Rights	https://cod.zoom.us/j/86141491819 Dr. Lisa Higgins	Dr. Lisa Higgins College of DuPage
Option 2: Mental Health Issues	https://cod.zoom.us/j/84584009232 Destiny Belzey	Dr. David Rhea Governors State University
Option 3: A Gen Z Guide to Marriage, Technology and Sleep	https://cod.zoom.us/j/85635292261 Britney Nakhammouane	Dr. Matthew Green College of DuPage
Option 4: Issues in Education, Part II	https://cod.zoom.us/j/89913581355 Dr. Nicole Matos	Dr. Nicole Matos College of DuPage
Option 5: Scientific Inquiry, Part III	https://cod.zoom.us/j/5793693319 Prof. Ken Orenic	Dr. Paul Small Eureka College

3:00-3:15 pm: Closing Remarks, Announcement of Award Recipients

“Student Choice Awards” Survey Link: <https://forms.gle/t7ZcWievqcygovsi9>

Virtual Headquarters

Zoom Link: <https://cod.zoom.us/j/81328981591>

HCIR Student Symposium Award Recipients

HCIR Student Symposium Awards!

Posters

1st Place

Noelle Bank, Elmhurst University

“Exploring the Roles of p53 and CHEK2 in Glioblastoma Multiforme”

2nd Place

Merveille Muyizere, Northern Illinois University

“Response of different body parts of house flies (*Musca domestica* - Diptera: Muscidae) to different tastants”

3rd Place

Scott Huston, Elmhurst University

“Spill the T: Misinformation About Transmasculine Contraception”

Presentations

1st Place

Hannah Hogue, Illinois State University

“Tracht: An Exploration into German Folk Dress, its Historical Connotations, and the Future of the Artform.”

2nd Place

Muhammad Bangash, Northeastern Illinois University

“Smartphone as an Edge for Context-Aware Real-time Processing for Personal e-Health”

3rd Place

Liam Kirschbaum, Governors State University

“Make Their Economy Scream: The History of 1980s Global Economic Policy”

Student Choice Awards!

Poster:

Veronica Swanson, Heartland Community College

“Hashimotos Thyroiditis and Why the Thyroid is Small but Mighty”

Presentation:

Mia Kaufman, Heartland Community College

“The Men's Mental Health Stigma”

Poster Awards

1st Place: \$250

2nd Place: \$150

3rd Place: \$100

Students Choice: \$50

Paper, Panel or Other Presentation Awards

1st Place: \$250

2nd Place: \$150

3rd Place: \$100

Students Choice: \$50

Presentation Schedule:

9:00-9:30 am: Welcome

9:30-9:55 am: Icebreaker Breakouts by Majors

10:00-10:55 am: Session 1

Option 1: Research on Learning and Love

Rachel Beckman/Sarah Solon, Governors State University

“Rational Love: How Personality Traits Can Influence Your Love Language”

Sumayya Yusuf/Leila Zarzour, Governors State University

“A New World of Learning: The Pandemics Effect on Education Locally and Globally”

Option 2: Issues in Education, Part I

*Daniel Tofte, Heartland Community College

“College Living”

*Yousuf Khan, Northern Illinois University

“Student and School Climate Characteristics Associated with Defending Victims of Bullying Among Middle Schoolers”

*Tiffany Cuevas, College of DuPage

“A Closer Look at Illinois Approach to K-12 School Funding”

* = Poster

Padlet Link for all Posters: <https://padlet.com/higgins19/est47ymozrypicjo>

Option 3: Immigration and Business in the Time of Covid

*Zelal Mustafaoglu, University of Illinois Springfield

“Textual Analysis of Companies Performance During the COVID-19 Pandemic”

*Jenny Lin, Heartland Community College

“How Covid 19 Effect Restaurant Industry?”

* = Poster

Padlet Link for all Posters: <https://padlet.com/higgins19/est47ymozrypicjo>

Option 4, Scientific Inquiry, Part I

*Noelle Bank, Elmhurst University

“Exploring the Roles of p53 and CHEK2 in Glioblastoma Multiforme”

*Aaren Manz, Northern Illinois University

“Engineering Reversible pH-Dependent Antibody Switches using Ionizable Triggers in an Anti-Caffeine VHH Homodimer Interface”

*Merveille Muyizere, Northern Illinois University

“Response of different body parts of house flies, *Musca domestica* (Diptera: Muscidae) to different tastants”

* = Poster

Padlet Link for all Posters: <https://padlet.com/higgins19/est47ymozrypicjo>

Option 5: Fashion and Finance

Hannah Hogue, Illinois State University

“Tracht: An Exploration into German Folk Dress, its Historical Connotations, and the Future of the Artform”

Mickael Agustin, Heartland Community College

“Fast Fashion: Haste Makes Waste”

*Fanami, Opeyemi, College of DuPage

“A(n) Unpopularized Financial Investment”

*Caitlin Hensley, Northern Illinois University

“How the Interlacing of the Psychology of Greed and Corporate Economics Affects Working Class Americans”

* = Poster

Padlet Link for all Posters: <https://padlet.com/higgins19/est47ymozrypicjo>

10:55-11:00 am: Break

11:00-11:55 am: Session 2

Option 1: We’re Made By History

Liam Kirschbaum, Governors State University

“Make Their Economy Scream: The History of 1980s Global Economic Policy”

Daniel Griner, Heartland Community College

“The Three Kingdoms of China”

Option 2: Child and Animal Welfare

Destiny Baker, Heartland Community College

“Children in Foster”

Carolyn Dering, College of DuPage

“Banning the Unethical Practices of Puppy Mills in Every State”

Kenneth Holdman, Heartland Community

“The End of Animal Abuse”

Option 3: Diving into the Literary Arts

Yulia Hutsul, Harper College

“Anne Sexton: Defending the Nature of Womanhood in the Poem ‘Her Kind’”

Anthony Reppman, Trinity Christian College

“Framing Frankenstein”

Rowan Brandou, College of DuPage
“The Glass Menagerie: ‘His Saddest Play’”

*Jaspreet Kaur, Harper College
“The Rise of the Working Class: The Atrocity of the Falling Aristocracy in Dracula”

* = Poster

Padlet Link for all Posters: <https://padlet.com/higgins19/est47ymozrypicjo>

Option 4: Innovations in Health Care

Muhammad Bangash, Northeastern Illinois University
“Smartphone as an Edge for Context-Aware Real-time Processing for Personal e-Health”

Sean Gunderson, Northeastern Illinois University
“Uncomfortable Conversations with a Psychiatric Survivor: Exploring the Paradigm Shift in Mental Health”

Ceejay Ritzke, Governors State University
“The Effect Horses Have on Mental Health”

Option 5: Coping Through Creativity

Ava Perino/Mariam Ahmed, Governors State University
“Journal Journeys: A Reflection of Growth and Healing of Inner Child”

Norbaya Durr, Elmhurst University

“Community Building with Literature: Bibliotherapy and Creative Writing Collaborative Storytelling”

Carolynn Green, Heartland Community College

“The Push Against Creativity”

12:00-12:30 pm: Lunch on Your Own

12:30-12:55 pm: Trivia Games With Prizes

1:00-1:55 pm: Session 3

Option 1: Violence Against or By Women

Varshitha Akella, Harper College

“Is She a Prostitute or a Slave? Methods to Decrease Sex Trafficking and Prostitution in Chicago”

Taiah Guess, Harper College

“A Hidden Epidemic: Chicago’s Missing and Murdered Women”

Option 2: National Solutions to The High Costs of Infrastructure and Higher Education

Maxwell Harris and Anjanette Francisco, College of DuPage

“The Current Condition of Our Infrastructure”

Option 3: Scientific Inquiry, Part II (Plus DINOSAURS!)

Francesca Burkett, Southern Illinois University

“Modeling Magma Production Beneath Subduction Zones”

Makayla Clark, Elmhurst University

“Geometric Morphometric Analysis of the Ontogenetic Differences in the Jaw of Hadrosauroid, *Eolambia caroljonesa*”

Hisham Elseweifi, College of DuPage

“The Effect of pH on Transdermal Permeation of Ibuprofen and Aceclofenac”

Option 4: Problematizing Ethics

Fatima Imam, College of DuPage

“The Ethics of Genetic Enhancement”

Alex Urbanski, College of DuPage

“Artificial Morality”

Zachary Walter, Eureka College

“Is the (Non)-Philosopher Mad?: An Analysis of Non-Standard Thought”

* = Poster

Padlet Link for all Posters: <https://padlet.com/higgins19/est47ymozrypicjo>

Option 5: Our Bodies, Our Health

*Scott Huston, Elmhurst University

“Spill the T: Misinformation About Transmasculine Contraception”

*Veronica Swanson, Heartland Community College

“Hashimotos Thyroiditis and Why the Thyroid is Small but Mighty”

*Aidan Bengford, Northern Illinois University

“American Film Culture on Disability Representation”

*Madelyn Crutcher, Heartland Community College

“Food Sensitivities and You”

* = Poster

Padlet Link for all Posters: <https://padlet.com/higgins19/est47ymozrypicjo>

1:55-2:00 pm: Break

2:00-2:55 pm: Session 4

Option 1: Fighting For Our Rights

Nicole Spencer, College of DuPage

“Access to Quality Education: An Analysis of a Fundamental Human Right”

Mary Dillon, College of DuPage
“Ensuring Abortion Rights for Women”

Option 2: Mental Health Issues

Alyssa Kraus/Caitlin Sellers, Governors State University
“Socioeconomic Status and Its Effects on Mental Health”

Mia Kaufman, Heartland Community College
“The Men's Mental Health Stigma”

Amirah Ahmed, College of DuPage
“Dying With Dignity”

Option 3: A Gen Z Guide to Marriage, Technology and Sleep

Jacklyn Mowrey, Heartland Community College “Couples
Challenges”

Caleb Drane, Heartland Community College
“Generation Z and Their Media Consumption Habits”

Owen Brown, Heartland Community College
“The Importance of Sleep”

Option 4: Issues in Education, Part II

*Madelyn Soldan, Elmhurst University

“Accommodating for Students with Autism or Dyslexia within the Music Classroom”

Alisa Wright, Heartland Community College

“Agriculture Education in Schools”

* = Poster

Padlet Link for all Posters: <https://padlet.com/higgins19/est47ymozrypicjo>

Option 5: Scientific Inquiry, Part III

*Tamryn Jordan, Saint Xavier University

“How Much Is Too Much? Calcium Oxalate Exposure in Small Animals”

*Behraam Khattak/Ismail Mohammad, Elmhurst University

“Sour Flavors Do Not Increase Risky Behavior in Daphnia Magna”

*Afreeen Mushtaheed, University of St. Francis

“Antibiotic Susceptibility Patterns in Bacillus Species Isolated from Biofilms in Sink Drains”

*Marion Bensing, Harper College

“Applications of GFP”

* = Poster

Padlet Link for all Posters: <https://padlet.com/higgins19/est47ymozrypicjo>

2:55-3:00 pm: Break

3:00-3:15 pm: Closing Remarks and Announcement of Award Recipients

Session Abstracts:

10:00-10:55 am: Session 1

Option 1: Research on Learning and Love

Rachel Beckman and Sarah Solon, Governors State University

“Rational Love: How Personality Traits Can Influence Your Love Language”

In the field of personality psychology, experts desperately pick apart the human experience as an attempt to define what sets each one of us apart from the other. Ever since analytical psychologist, Carl Jung, introduced the concept of personality types, many others have followed suit to explain the human experience. A hundred years later, the Enneagram test does just this by separating personalities into nine different types, each determined by a self-assessment evaluation. With this, an individual can reflect on their core values and how they apply this in their day-to-day life. Alongside this, the Enneagram depicts an individual’s needs and desires in relationships, namely, their love language. To that end, not much research has been done to explore how these two correlate. Rachel Beckmann and Sarah Solon explore just how much impact the personality type has on relationships across the board by utilizing both firsthand and secondary research. For instance, can an Enneagram type 8 be more likely to pursue a love language that pertains to quality time, or is this pair just by chance?

Sumayya Yusuf and Leila Zarzour, Governors State University

“A New World of Learning: The Pandemic’s Effect on Education Locally and Globally”

The COVID-19 epidemic has devastated school systems around the world since its outbreak two years ago, having a severe effect on students' education worldwide as teaching was transferred online. With all the obstacles and

adjustments to this new unprecedented time for young students, researchers speculate that the pandemic's aftermath threatens to hinder this generation's prospects and limit their options far into adulthood. Especially for students in high school who were transitioning into college, having part of their high school education online could have severe consequences on their social skills, which are essential to securing a well-paying job. In our presentation, we seek to examine the pandemic's effect on high school students in the US, as well as globally, and observe the different changes that have been implemented in education around the world to adjust to this new world of learning.

Option 2: Issues in Education, Part 1

Daniel Tofte, Heartland Community College

“College Living”

Through my poster I hope to inform you of the importance of where you live during your pursuance of college education.

Yousuf Khan, Northern Illinois University

“Student and School Climate Characteristics Associated with Defending Victims of Bullying Among Middle Schoolers”

Bullying among adolescents is a prevalent and concerning issue in schools. Of the five bullying participant roles, defending behavior is the focus of this study because it is a beneficial skill for students to learn and for researchers to understand in order to mitigate bullying. Our study explored student and school climate characteristics associated with defending behavior among a large middle school sample across gender. We predicted that students with more social-emotional problems would be less likely to defend, while students with high prosocial behaviors

would be more likely to defend. In addition, we hypothesized students who report a more positive school climate are more likely to demonstrate defending behavior than students who report a more negative school climate. Three self-report surveys were distributed to students. The Strengths & Difficulties Questionnaire collected participants' level of emotional, conduct, and peer problems. The Safe and Responsive Schools questionnaire measured perception of personal safety and school belongingness. The Bullying Participant Behaviors Questionnaire measured engagement in defending.

Tiffany Cuevas, College of DuPage

“A Closer Look at Illinois Approach to K-12 School Funding”

This project will focus on the funding aspect of K-12 schools in the state of Illinois. The presentation will touch a bit on the distribution of funding at both federal and state government levels. Additionally, the project will take a further look at what makes school budgets the way they are as a result of legislature and policy. Also, a variety of schools (private, charter, and public) will be compared to see how they are impacted differently or not as much. Then, the presentation will take into consideration how differing budgets affect school communities and discover how the rise of COVID-19 has presented more challenges. After reviewing all other aspects of what goes into funding schools, the project will present ways individuals and the government will and have taken action to ameliorate funding to achieve greater education for students. Overall, the presentation will center on all the factors that go into creating school funding, the outcomes, and better ways of managing effective funding.

Option 3: Business in the Time of Covid

Zelal Mustafaoglu, University of Illinois Springfield

“Textual Analysis of Companies Performance During the COVID-19 Pandemic”

This research explores the use of text analysis to evaluate the reporting of specific topics in company financial statements. Our objective is to determine the aspects in which the COVID-19 pandemic affected the performance of companies, and companies intentions in reporting COVID-19 in their financial statements. First, we run a Jupyter Notebook script to download selected companies 10-Ks which include certain keywords relating to COVID-19. Using another script, we split these 10-Ks into sentences. For data preprocessing, we employ KH-Coder, which uses Stanford POS Tagger to extract words from English data, R for statistical analysis, and MySQL to organize and retrieve the data. Then, we use KH-Coder to build co-occurrence graphs, multi-dimensional scaling, and hierarchical cluster analysis to verify the association among keywords. We use the K-means clustering algorithm to identify the ways in which COVID-19 impacted companies performance and their intentions in disclosing this impact.

Jenny Lin, Heartland Community College
“How Covid 19 Effect Restaurant Industry?”

In this presentation, I focus on how Covid 19 effect the restaurant industry in the United States since it happen. I divided the time line to 3 stages. The article uses data and actual cases of catering owners to analyze their personal experiences and prospects for the industry at different stages. The purpose for this program is to help people understand the situation for this industry.

Option 4: Scientific Inquiry, Part I

Noelle Bank, Elmhurst University
“Exploring the Roles of p53 and CHEK2 in Glioblastoma Multiforme”

Glioblastoma multiforme (GBM) is one of the most aggressive brain cancers with one of the shortest survival times at prognosis. GBM can also reoccur in patients that have successfully completed treatment. CHEK2 and p53 are two genes that, when dysfunctional, play an important role in cancer formation. It was hypothesized that expression levels of CHEK2 and p53 would be significantly lower in patients with recurrent GBM when compared to patients with primary GBM. It was also hypothesized that a shorter length of survival can be correlated with lower expression of CHEK2 and p53. Through extensive research, it was found that neither hypothesis had statistically significant data and therefore no conclusion could be drawn.

Aaren Manz, Northern Illinois University

“Engineering Reversible pH-Dependent Antibody Switches using Ionizable Triggers in an Anti-Caffeine VHH Homodimer Interface.”

Antibodies are highly customizable biological tools that are used in numerous medicinal and life science applications due to their high binding affinity and specificity. Despite being a major benefit, the high binding affinity of antibodies can be a limitation of some applications, where the antibody-antigen interaction becomes a one-way binding event. This project aims at using camelid antibodies as a model system for generating and characterizing reversible antibody switches that bind tighter at higher pHs and weaker at lower pHs, allowing for the antibodies to be reused in certain circumstances. Using Isothermal Titration Calorimetry, we have characterized two promising mutants of the Camelid Anti-Caffeine VHH system, as well as attempted to create a double mutant to further study the extent to which pH dependency will affect the antibodies.

Merveille Muyizere, Northern Illinois University

“Response of different body parts of house flies (*Musca domestica* - Diptera: Muscidae) to different tastants”

The main purpose of my experiment is to understand the response of house flies' legs to sugar and bitter

compounds. Over time, the response of antennae and wings will be examined. These body parts of the flies have taste receptors that trigger a response to sugar and bitter compounds. Because house flies usually feed and reproduce in feces and other decaying organic substances, they live intimately with many microorganisms including human pathogens, which may stick to the body surfaces of the fly. Transmission of pathogens to humans and animals occurs as flies travel between their breeding sites and human dwellings. Baits are very useful in controlling house flies and contain sucrose and insecticide. The sucrose stimulates feeding by house flies, and the insecticide kills them. Knowing their response to different compounds will be useful in making effective baits and insecticides that contain those compounds that trigger responses. Then it will be easier to manage flies, reducing their negative effects on the environment.

Option 5: Fashion, Business and Politics

Hannah Hogue, Illinois State University

“Tracht: An Exploration into German Folk Dress, its Historical Connotations, and the Future of the Artform.”

Inspired by her German and Austrian heritage, Hannah chose to explore the history and importance of the dirndl through the creation of her own. Balancing the richness of the past with the hope of the future, Hannah dives deep into the origins of traditional dress and its use as propaganda during the Nazi regime, as well as discussing how the global community can reclaim the dirndl.

Mickael Agustin, Heartland Community College

“Fast Fashion: Haste Makes Waste”

Since the early 80's, fast fashion has become the expected business model for producers to deliver their products to the consumers. First coined by The New York Times in the early 1990s, the term “fast fashion” refers to the

business model that provides consumers with readily available and inexpensive articles of clothing. The word “fast” refers to how quickly retailers can recreate designs from the catwalk and offer them to consumers in their stores. Today, it is nearly impossible to avoid fast fashion products. With speed and convenience in mind, the supply has surpassed the demand creating waste beyond repair. Through the extended research and surveys, it is found that issues arise beyond carbon emissions.

Fanami, Opeyemi, College of DuPage
“A(n) Unpopularized Financial Investment”

This project was designed to encapsulate another form of financial literacy not a lot of people consider expect when buying a home, Real-Estate. Real-Estate is a form of putting money into a house/complex/etc. and allowing the house/complex/etc. grow in value over time. Something most people don't even consider they can do! This presentation and what I say goes deeper into detail about the intricacies of another viable source of income for others.

Caitlin Hensley, Northern Illinois University
“How the Interlacing of the Psychology of Greed and Corporate Economics Affects Working Class Americans”

The link between the psychology of greed and corporate economics heavily affects working-class families in the United States. In the present-day United States, many corporations such as Amazon and Google are taking strides to outplay and outlast their competitors. These big corporations are successful by incorporating the psychology of greed into their business tactics such as outsourcing, tax evasion, and profit manipulation. This research uses statistical analysis to gain a better understanding of the extent that working-class families are adversely affected by these tactics. While there has been former research on the subject, most of that research focuses disproportionately

on urban family lifestyles while this new research will also consider rural and agricultural lifestyles. The major takeaway is that corporations are unjustly using these tactics to exploit working-class Americans for capital gain which endangers the entire premise of the American Dream.

11:00-11:55 am: Session 2

Option 1: History

Liam Kirschbaum, Governors State University

“Make Their Economy Scream: The History of 1980s Global Economic Policy”

In September of 1973, the Nixon administration backed the military coup of the democratically-elected socialist government of Chile, installing General Pinochet as dictator to reverse the socialist policies of his predecessor, skyrocketing inflation to 505%. To recover, Chile would enforce neoliberal policy under totalitarian conditions in what is falsely dubbed an Economic Miracle, the effects of its transformation disastrous for the Chilean working class. The policies implemented in Chile are strikingly familiar: By the ‘80s, Reagan, Thatcher, Yeltsin, and the European Central Bank applied Chile’s policies abroad: Massive tax cuts in the US, union-busting in the UK, privatization in Russia, and the sudden installation of a credit system in debtless Greece. Drawing on historical evidence and research done by Greg Grandin and Yanis Varoufakis, I will explain the disastrous history of policy that affects our lives to this day.

Daniel Griner, Heartland Community College

“The Three Kingdoms of China”

A look into one of the most pivotal and widely known conflicts in Chinese history.

Option 2: Child and Animal Welfare

Destiny Baker, Heartland Community College

“Children in Foster”

My presentation is about the process that not only children but social workers go through when it comes to taking children out of bad homes and where they go to from there whether it is to a foster home or family as well as depending on their age how long they will be in foster care and the effects that come out of being in foster care.

Carolyn Dering, College of DuPage

“Banning the Unethical Practices of Puppy Mills in Every State”

My presentation brings to light the inhumane and unethical practices within the commercial dog breeding industry. It is legal in most U.S. states for puppy mills to force dogs to live in deplorable conditions. The government takes little action in implementing and enforcing regulations regarding the care of the animals. I state the need for the Puppy Protection Act of 2021 to be added to the Animal Welfare Act. This bill would enforce that dogs in the commercial dog breeding industry be given proper care, therefore, bettering the lives of the animals.

Kenneth Holdman, Heartland Community College

“The End of Animal Abuse”

Animal abuse is very prominent in this world. Most people think it is wrong but there are some people who feel it is right; however, some feel it's fine to abuse animals or do not have an opinion because they do not know enough about it. We need to change that in order to stop or decrease animal abuse. This presentation will discuss the main issues of animal abuse, why people abuse animals, a study that links animal abuse to child abuse, and give some ways to decrease animal abuse.

Option 3: Diving into the Literary Arts

Yulia Hutsul, Harper College

“Anne Sexton: Defending the Nature of Womanhood in the Poem ‘Her Kind’”

Her acquaintances, literary critics, and readers regard Anne Sexton as one of the most influential American poets of the mid-20th century. Sexton is often considered "the most persistent and daring of the confessionalists." Specifically, in the poem "Her Kind," she encourages women's individuality and freedom of expression, indirectly contributing to the transformation of American society during the second wave of feminism. The forthrightness of Sexton's writing and her courage to tackle controversial and often banned topics is what made her momentous. First, I examine Sexton's writing style in the poem "Her Kind" in the light of what it means to be a confessional poet. Further, I argue that through her poetry she influenced the feminist movement, despite denying a direct connection to it. Lastly, I connect her work to contemporary issues, examining how American women are still fighting for their rights.

Anthony Reppman, Trinity Christian College

“Framing Frankenstein”

This paper investigates a lesser-known element of Mary Shelley's *Frankenstein*: the narrative frame and occasion for the inner story. While scholarship has acknowledged that Walton's letters are a link to the inner stories of Frankenstein and his creation, very little has understood it as a connection to the author, and even less has seen it as a bridge between Shelley's reality and the inner story of the creature. This seemingly conscious imposition of the author's ideas onto a fictional narrative positions Shelley at a unique time in literary history, revealing the structure of *Frankenstein* as surprisingly similar to that of later Modernist novels rather than to others of the Romantic period when it was written.

Rowan Brandou, College of DuPage

“The Glass Menagerie: ‘His Saddest Play’”

The presentation focuses on Tennessee Williams's life during and prior to writing "The Glass Menagerie" to investigate why he considered it the saddest play he ever wrote.

Jaspreet Kaur, Harper College

“The Rise of the Working Class: The Atrocity of the Falling Aristocracy in Dracula”

Have you ever dreamed of a life of nobility and its comforts? I would like to introduce you to Count Dracula, who strives to dissolve his nobility in favor of attaining the simplicity of the common masses. My poster is about the rise of the working class and the loss of aristocratic influence in Bram Stoker’s novel Dracula. Throughout the novel, different characters, such as solicitor Johnathan Harker and Lord Godalming, symbolize this shift in power dynamics. In one instance, Dracula himself dresses up in a solicitor’s clothes for added anonymity. The novel ends with a normal English solicitor defeating a successor of the Boyar royals. In addition to this, the background turmoil in the novel aligns with the ongoings of London in the Victorian era. So, buckle up for the turbulent ride of a battle between the hardworking skilled and the favored successors of royalty.

Option 4: Innovations in Health Care

Muhammad Bangash, Northeastern Illinois University

“Smartphone as an Edge for Context-Aware Real-time Processing for Personal e-Health”

The current medical field is facing a problem of how patients can share their health-related information with healthcare providers. This involves secure sharing, diverse data types, and formats reported by healthcare-related devices. In this project, we propose a multilayer framework to address these challenges in the context of the Internet of Medical Things. In our framework, we have sensors and medical devices that measure vital signs and

communicate such data with smartphones. The smartphone is used as an edge device to visualize, analyze, and report context-aware data to the cloud-layer that provides a secure database for users medical information and a set of services for processing. Our focus will be on medical device connectivity, data collection, and interoperability for frictionless data processing to build context-aware personal medical records (PMRs). These PMRs will be securely stored and processed by a cloud platform and utilized by other authorized medical staff and institutions.

Sean Gunderson, Northeastern Illinois University

“Uncomfortable Conversations with a Psychiatric Survivor: Exploring the Paradigm Shift in Mental Health”

This project will focus on the ongoing scientific paradigm shift in the field of mental health. The final project will take the form of a three-episode podcast series, which will cover history, current research, and future possibilities of the interdisciplinary field of mental health. A different co-host will participate in each episode offering their unique professional perspective. The content creator will serve as a host in each episode and share his lived experience with so-called mental illness and the treatment system. The nature of the ongoing scientific paradigm shift is such that previously proposed medically based hypotheses for mental illness have not been supported adequately by subsequent research. A substantial internal controversy in the field of mental health has resulted, which remains obscured from the public. Meanwhile, the unsubstantiated medical hypotheses of the previous paradigm arrive at and persist in the public consciousness.

Ceejay Ritzke, Governors State University

“The Effect Horses Have on Mental Health”

People have ridden horses all throughout history. Once ridden for transportation and then for sport, we now understand that there are therapeutic benefits of working with horses. Horses are very unique animals and have a different mindset compared to cats and dogs. They are able to read different facial expressions and human emotions and will change their behavior accordingly. This emotional engagement often shows benefits for people who

experience different mental health conditions. One study found that horses are better able to help people who suffer from PTSD than cognitive behavioral therapy and exposure therapy which are associated with high dropout rates. In this presentation, I will talk about the various ways horses help improve mental health for anyone from regular everyday riders to people who experience more severe mental health conditions like PTSD.

Option 5: Coping Through Creativity

Ava Perino and Mariam Ahmed, Governors State University

“Journal Journeys: A Reflection of Growth and Healing of Inner Child”

Not a classic novel, but also not a classic presentation. Open our book filled with thoughts and experiences that connect to our literacy journeys. Witness how color and symbolism in our original art illustrate our experiences. By doing so, we reconnect to our inner child that was forgotten about. As we uncover our creative sides, each page represents our changing perspectives about literacy. We discuss the value of creativity in everyday life employing James Kaufman's research and other sources. This book is a unique approach to storytelling and research, intending to validate the importance of creativity. Flip through our journal and flip through our creative minds. We learned to write, we learned to read, come and see our literacy journeys.

Norbaya Durr, Elmhurst University

“Community Building with Literature: Bibliotherapy and Creative Writing Collaborative Storytelling”

Bibliotherapy and creative writing are recognized learning and therapy techniques that can support emotional healing and cognitive growth but have not been explored in-depth at the community level. Bibliotherapy could address public health issues and sociocultural-bound syndromes/differences. Cultural differences can impede well-being response and its improvement might be dependent upon understanding cultural narratives. This study investigated how bibliotherapy and creative writing impacted mood, stress, and perception, the synthesis of community building with text, and a potential literary-based community-building model intersecting bibliotherapy,

bibliodidactics (teaching how to experience) and the Empowerment Theory (multi-level and multi-type sense of control). Five students read fiction/non-fiction, discussed texts, and wrote reflective essays for 3 hours across 2 days. Positive mood increased (25%), stress-level decreased (25%). A collaboratively written poem expressed themes found in text and centered healing commandments. Though conducted with a small group, results indicate positive change at the individual level can impact community-level well-being.

Carolynn Green, Heartland Community College
“The Push Against Creativity”

In this presentation, I will explain how and why creativity is pushed aside in schools. My sources will show how creativity has severely declined in the last few decades in the school system giving multiple reasons, the most prominent being that schools require funding and they acquire that funding by making their students take tests; therefore, schooling is taught by lessons that teach to a test. However, these tests are on math, science, and composition English, leaving creativity to die inside the school system. By the time we are adults, the creativity is significantly less than that of our child self.

1:00-1:55 pm: Session 3

Option 1: Violence Against or By Women

Varshitha Akella, Harper College

“Is She a Prostitute or a Slave? Methods to Decrease Sex Trafficking and Prostitution in Chicago”

In Chicago, 16,000 to 25,000 women and girls are involved in the sex trade industry every year; some are as young as four. Studies show that a significant percentage of women in the Chicago sex trade are working under the threat of violence. That is the definition of sex trafficking, a form of modern slavery. I examine the prevalence as well as the methods of reducing sex trafficking and prostitution in Chicago. I advocate for the implementation of the Equality Model, which has been successfully implemented in many European countries. This model is the practice

of holding johns (buyers of sex) and pimps responsible by decriminalizing the selling of sex. This would mean selling sex is not a crime, but buying and pimping are. This paper provides insight into the lives of sex workers and the dangers that they face, including the threat of violence from law enforcement.

Taiah Guess, Harper College

“A Hidden Epidemic: Chicago’s Missing and Murdered Women”

Many bright young faces have lit up American television screens in recent decades. Their innocence is captured in grainy home videos alongside popular true crime series documenting their lives leading up to their disappearances and tragic deaths. These missing persons cases captivate major news outlets and follow a similar formula: A beautiful young white woman from a small town disappears, and amidst this tragedy, a community bonds to find justice and honor her legacy. However, these crimes are not limited to small towns and occur in major cities like Chicago. This paper explores the violence that plagues primarily African-American women on the South Side of Chicago, resulting in nearly 100 missing persons cases where the names are quickly forgotten and stories left untold. In a country that claims to be progressive in terms of race relations, we must ask ourselves about these discrepancies in media coverage and justice for women of color.

Option 2: National Solutions to The High Costs of Infrastructure and Higher Education

Maxwell Harris and Anjanette Francisco, College of DuPage

“The Current Condition of Our Infrastructure”

Our group will be explaining issues related to modern day infrastructure, specifically honing in on that of bridges in the United States. We will dive into recent bridge collapses and provide explanations regarding what happened and what could have been done to prevent this. We will then take a step back and explain the current condition of most US bridges per data provided by the National Bridge Library, as well as the state of most infrastructure in the

United States.

Option 3: Scientific Inquiry, Part II (Plus DINOSAURS!)

Francesca Burkett, Southern Illinois University

“Modeling Magma Production Beneath Subduction Zones”

The Earth's crust is divided into pieces called Tectonics Plates. Subduction zones occur where two plates collide, causing the denser plate to be pushed beneath the more buoyant plate. Many of Earth's volcanoes are located at subduction zones. Creation of magma at subduction zones depends on many variables, including mineral composition, water content, age of the plate, and speed of plate convergence. My research uses numerical models to evaluate how these parameters affect the total amount magma in these regions, such as changing the angle at which the plate subducts, the rate of subduction, the age of the plate, and composition. Each of these parameters affected the overall melt production in these models. Increasing the amount of hydration, dip angles, and convergence rates increased the magma production, while increasing age of the plate decreased the overall melt production.

Makayla Clark, Elmhurst University

“Geometric Morphometric Analysis of the Ontogenetic Differences in the Jaw of Hadrosauroid, *Eolambia caroljonesa*”

Eolambia caroljensa, a dinosaur from the hadrosauroid taxa, has been studied because its quantity of preserved specimens is beneficial to our understanding of developmental relationships. A geometric morphometric analysis was completed to investigate the intraspecific developmental relationship between *Eolambia* adult and perinatal coronoid processes. Results led to a predicted relationship between adult, juvenile, and perinatal dentary. Anatomical landmarks were used to identify specimen shapes. TPS utility converted specimen images for use while TPS digitize generated landmark data for coronoid processes and dentary analysis. TPS relative warps

provided consensus, partial warp, and relative warp data plots that characterized the shapes of specimens. Partial and relative warp scores and centroid size were also available. Coronoid process landmarks demonstrated two separate data clusters between juveniles and adults. Members of the same clusters shared similarities. Dentary data supports the hypothesis that allometric growth, with some variation, occurred between all growth stages.

Hisham Elseweifi, College of DuPage

“The Effect of pH on Transdermal Permeation of Ibuprofen and Aceclofenac”

My presentation offers an opportunity to understand and appreciate medications as chemical compounds with unique properties. These properties determine the ability of that medication to do what it was made to do. For example, pH is a chemical property that describes how acidic or basic something is. The pH of a medication is related to its ability to reach its target destination. This presentation will compare the pH of two medications, Ibuprofen and Aceclofenac, and their ability to permeate the skin.

Option 4: Problematizing Ethics

Fatima Imam, College of DuPage

“The Ethics of Genetic Enhancement”

The ethics of biotechnology can be applied to a diverse set of issues, however, in this presentation I will be arguing against the act of genetic enhancement. Genetic enhancements are ethically unacceptable as manipulation to genes for non-health related purposes can lead to issues where societal divisions will be exasperated. Although genetic enhancements might seem appealing because of what can be done to make more desirable humans, there are copious consequences that come with it.

This presentation will offer an interdisciplinary approach between the ethics of genetic enhancement and moral philosophy. I will look at the benefits and dangers of genetic enhancement, whether it should be restricted, and

what its long-term effects would be. These are just some of the points that will be addressed by integrating scientific research and theories of moral philosophy on this applied ethical issue.

Alex Urbanski, College of DuPage
“Artificial Morality”

An explanation of why our world now requires machines to make value-based decisions, the technology that enables ethical decision making, how machines can fathom human ethics, and the applications of ethical machines.

Zachary Walter, Eureka College
“Is the (Non)-Philosopher Mad?: An Analysis of Non-Standard Thought”

Non-philosophy is an emerging domain within Anglophone philosophy, yet its major proponents (to treat concepts devoid of their power, of modes of thought to take the form of a guiding fiction, etc.) are reminiscent of qualities of the mad subject (who concedes control of emerging concepts/symbols in their mind and is haunted by the fiction of reality). Is there an underlying connection, or is the relation coincidental?

Option 5: Our Bodies, Our Health

Scott Huston, Elmhurst University
“Spill the T: Misinformation About Transmasculine Contraception”

Transmasculine individuals are people assigned female at birth who identify as masculine, male, or non-binary. Individuals who retain reproductive organs can become pregnant regardless of hormone use for medical transition. Those who do not wish to become pregnant must use safe and effective methods of contraception. Misinformation about effective methods of contraception exist in the transmasculine community and among providers, and research shows that there is inadequate communication about fertility to transgender patients. More research must be

performed about the safety and effect of testosterone on transmasculine fertility. Providers must be aware of the unique needs of this community to provide safe recommendations for contraception and family planning.

Veronica Swanson, Heartland Community College

“Hashimotos Thyroiditis and Why the Thyroid is Small but Mighty”

I will be focusing my poster on the Thyroid and an autoimmune disease called "Hashimoto's Thyroiditis." I will go into how the disease was found, how you can look for symptoms, what happens when you don't take care of your thyroid, and how it effects every aspect of the body. I have this disease myself, so I will be incorporating my own experiences with it as well.

Aidan Bengford, Northern Illinois University

“American Film Culture on Disability Representation”

Historically, disability representation has not been positive in popular film media. People with disabilities are often portrayed as either incapable, unable to be a part of society, or excellent examples of overcoming adversity. These portrayals take away the personhood of people with disabilities. This study aims to see whether or not that type of portrayal is still prevalent in modern popular film media and how that reflects the current American culture and perspective surrounding the discussion of disability. Previous studies have been more limited in scope, aiming to do case analysis rather than casting a wide net. Preliminary data shows small amounts of stereotypes and stronger examples of positive portrayals.

Madelyn Crutcher, Heartland Community College

“Food Sensitivities and You”

Food Sensitivities can affect everyone, not just those with the common ones like lactose, and gluten. According to Sandy Gifford (RD LDN) a Dietitian at Carle BroMenn Hospital Normal, IL, Some people don't know that they

suffer from food sensitivities. Food sensitivities can sometimes be brought out if you get sick. While not common, food sensitivities can be developed in adulthood, but most people who have had them since childhood grow out of them, but not all people. (Gifford 2021) The Research of food sensitivities is fairly new, well food allergies, and food intolerances are more commonly recognized. There is also the fact that even if you know that you have a food sensitivity, do you know that what pollen you are allergic to can affect your food intolerance/ sensitivities.

2:00-2:55 pm: Session 4

Option 1: Fighting For Our Rights

Nicole Spencer, College of DuPage

“Access to Quality Education: An Analysis of a Fundamental Human Right”

My project is a PowerPoint slide show from my English 1101 class, analyzing three kinds of texts which focus on a social issue that is important to me. I chose access to quality education because I had been a part of the Stevens Initiative through COD this fall. Being paired with a team of students from Salahaddin University in Erbil, Iraq made me realize there is a great disparity in educational access throughout the world, and they inspired me to research the topic for my social issue project. In it, I break down the logos, ethos, and pathos for each of the kinds of texts along with information on how my classmates can get involved.

Mary Dillon, College of DuPage

“Ensuring Abortion Rights for Women”

Abortion is not just a women's issue, but a serious topic for all people who have a uterus. Whether they are trans, nonbinary, or intersex, the fight for abortion rights is also their fight. Giving them a voice is essential to the fight for abortion as not only is banning abortion blatantly anti-women but anti-trans. The misogynistic and homophobic bills across the country that have severely limited access to abortions need to be stopped. Additionally, to ensure

Roe stays in place, The Women's Health Protection Act must be passed in order to save abortion nationwide.

Option 2: Mental Health Issues

Alyssa Kraus and Caitlin Sellers, Governors State University

“Socioeconomic Status and Its Effects on Mental Health”

Recently, mental health problems have become more widely understood, but not much has been done to lower the factors that may cause these illnesses. While anyone can have mental illness, it is disproportionately high among groups with a lower socioeconomic status (SES). SES stems from factors such as income, housing, and accessibility to quality food and healthcare. Individuals within a lower SES may have additional life stressors like worrying about paying for rent or childcare, or high rates of neighborhood violence. If they dealt with these pressures growing up and into adulthood, they may struggle to control and express their emotions, and they may develop mental illnesses which can put them at a disadvantage of getting a well-paying job and quality healthcare. It is important to understand the factors that contribute to risks of developing mental illness in order to improve health, opportunities, and quality of life.

Mia Kaufman, Heartland Community College

“The Men's Mental Health Stigma”

According to the American Psychological Association, men are four times more likely to commit suicide than women within the United States. Although mental illness is prevalent in both men and women, it is oftentimes overlooked in males. Men are also two to three times more likely to misuse substances (Center for Behavioral Health Statistics and Quality, 2017). With these troubling statistics, it is noted that males are less likely to seek help and are more likely to endure dangerous behaviors. Experiencing mental health is associated with an individual being weak, and as men are expected to be courageous and masculine, it is that perception that leads to rejection of experiencing mental health as well as seeking professional help. The stigma among men's mental health is known

as the silent killer which society has created causing an extreme barrier for those needing professional treatment.

Amirah Ahmed, College of DuPage
“Dying With Dignity”

Let us take a left turn down the road of bodily autonomy into a dark realm. Active assisted suicide is the deliberate ending of one's life with aid of a professional. This opens a box of horrors. Is it right to kill an innocent person? Assisted suicide does not undermine the life of an individual. On the contrary it gives a greater power to a person. Assisted suicide gives an individual complete control of their life and death. The sentiment behind such is to bring dignity to a person in death, by allowing them to pass on their own terms. In this paper the analogy of death will take on the form of a video game in which a player is granted complete creative freedom. “John” will choose whether to continue his life at the mercy of his degenerative condition, or be free and permanently upload himself into the game.

Option 3: A Gen Z Guide to Marriage, Technology and Sleep

Jacklyn Mowrey, Heartland Community College

“Couples Challenges”

Challenges couples may face when getting married.

Caleb Drane, Heartland Community College
“Generation Z and Their Media Consumption Habits”

In this presentation I plan to first try to find and outline some of the factors that influence Gen Zs media consumption. Secondly, I plan to outline some of the forms of media such as social media, video games, and movies. Looking into how each form of media interacts with Gen Z. By the end of this presentation, I hope to be able to give a better understanding of Gen Z and their media consumption habits. According to the financial

company Deloitte's annual digital media trends survey (Westcott et al., 2021), Generation Z (Gen Z for short) when compared to Baby Boomers, Generation X and Millennials, are the only generation where watching movies and television is not the preferred type of entertainment. The majority of Gen Z instead prefers playing video games. Whether you believe in the idea of generations or not, there is no denying that younger individuals have vastly different entertainment preferences than older individuals. This begs the question why do we consume the media we do? This paper will focus specifically on Gen Z, examining their media consumption habits as well as what causes them.

Owen Brown, Heartland Community College
“The Importance of Sleep”

This article is going to dive into depth about the health benefits of sleep along with the health consequences that go along with poor sleep hygiene and chronic sleep deprivation. The point of this article is to inform people about how beneficial sleep is so they can start to reap the benefits to memory, mood, and recovery from physical activity. Also, to spread awareness about the potentially dangerous side effects of chronic sleep deprivation such as increased risk of cardiovascular related disease, cancer and mental health issues. On the surface sleep seems very simple but it is far from that, it regulates almost every function in the human body.

Option 4: Issues in Education, Part II

Madelyn Soldan, Elmhurst University
“Accommodating for Students with Autism or Dyslexia within the Music Classroom”

Music is a crucial aspect in the development of children and leaves a strong impact on all the lives it touches. An education in music benefits students at various ages and abilities, but the proper resources must be provided to allow everyone to thrive. The primary concern that arises is in regard to how music educators provide accommodations that align with a curriculum that reinforces equitable participation in their classrooms, allowing

music to touch the lives of all students. This research investigates the history of accommodations and modifications in the music classroom, as well as how they can be extended in the future to help support students with autism and learning disabilities such as dyslexia. These accommodations are found to be successful in enhancing student learning across the board.

Alisa Wright, Heartland Community College
“Agriculture Education in Schools”

This paper explores agriculture education in schools by exploring the history, and the three interconnected components of agriculture education. To effectively explore these topics we will delve deeper into the components, which include classroom or laboratory instruction, experiential learning (SAEs), and leadership education. I will discuss the importance of having all three of these components present in the educational process as well as the different skills that students will gain from this process. We will discuss the skills learned through leadership training, SAEs, and Parliamentary Procedures, and how those skills will assist the student with future goals.

Option 5: Scientific Inquiry, Part III

Tamryn Jordan, Saint Xavier University
“How Much Is Too Much? Calcium Oxalate Exposure in Small Animals”

Between 2015 and 2019 plant toxins have ranked eight or ninth place on the Animal Poison Control Center’s annual list of top ten pet toxins. As of March 2020, the APCC ranked houseplants and bouquets as the fifth most common pet toxin. This study focuses on insoluble calcium oxalate crystals in five plants: the arrowhead vine, Chinese evergreen, cut leaf philodendron, dumbcane and golden pothos as well as three non-toxic plants. These crystals may cause oral irritation and labored breathing in animals, but the severity of these symptoms are dependent upon the concentration of toxin consumed. In order to assess their potential threat to animals, the concentration of calcium oxalate crystals in each plant was determined. Based on an assessment of the

concentration of the toxin in each plant organ, a decision was made on the severity of the threat, if any, each plant posed to companion animals.

Behraam Khattak and Ismail Mohammad, Elmhurst University
“Sour Flavors Do Not Increase Risky Behavior in Daphnia Magna”

Acids, herbicides, and prescription contamination in bodies of water has been shown to either negatively alter the health of certain species of Daphnia or enhance their phototactic behavior depending on the substance. Phototactic behavior can be used to measure risk taking in species of Daphnia. Protocols measuring diel vertical migration were used as a metric of analyzing risk-taking across treatment groups. Statistical tests were analyzed to measure whether there were significant differences across treatment groups. Positions across treatment groups were statistically insignificant but may shed light upon future protocols that can address similar questions regarding risk-taking in other species more closely related to humans. Implications of this experiment suggest that a sour treatment correlating with risk-taking may not be a universal reaction in all organisms but just a unique property in humans.

Afreen Mushtaheed, University of St. Francis
“Antibiotic Susceptibility Patterns in Bacillus Species Isolated from Biofilms in Sink Drains”

Biofilms behave like multicellular organisms: Previously free-living unicellular organisms communicate to make group-level decisions in the film. This is an emergent property of biofilms not predicted by the behavior of individual bacteria. The properties and strength of the biofilm are determined by the adhesion of the cells to a substrate and the cohesion of the cells to each other. The biofilm formation is fixed in an outer polymeric substance made of an extracellular polymeric substance (EPS) matrix. The study was undertaken to determine the antibiotic susceptibility patterns of two unknown Bacillus species, isolated from biofilms found within sink drains. One Bacillus species (B1) exhibited resistance to ampicillin and the other Bacillus species (B2) was non-resistant to ampicillin and streptomycin. The results suggest that the culture environment had an effect on the antibiotic

susceptibility patterns of the *Bacillus* species perhaps by inducing or inhibiting the expression of antibiotic-resistant genes, as has been seen in other microorganisms.

Marion Bensing, Harper College
“Applications of GFP”

GFP or Green Fluorescent Protein is a hugely important tool in biology and chemistry. It originated from the jellyfish *Aequorea victoria* and its protein is one that absorbs blue light and emits green light. GFP was first discovered during the purification of the bioluminescent protein aequorin. It was not until 30 years after its discovery that scientists cloned the gene encoding GFP, paving the way for experiments to assess its utility in living organisms such as *E. Coli*, plants, and mice. GFP has also revolutionized bio-medical research, enabling visualization of major diseases and aspects of cancer in other living animals. The use of GFP can be done easily and efficiently and allows for real-time analysis of molecular events. Come learn more about its remarkable characteristics, its modern day applications, and its glowing future in medicine.