



Student Scholarly Work Conference Lehman College Spring 2022



Register here:

https://lehman-cuny-edu.zoom.us/meeting/register/tZcldu-hqzMqHNczoisE WLZ52jU1fSTFRYrb

Schedule for the Day

10 am - Welcome

<u>10:15 to 12:15 - Morning presentations - Hear live presentations from</u> <u>students</u>.

<u>12:15 to 12:45 - Keynote presentation: Faculty and student research</u> <u>collaboration - Hear from a Lehman faculty and CUNY student about the</u> <u>Realities of Student Research!</u>

<u>12:45 to 1:15 - Lunch and Learn about Research Opportunities - Bring your</u> <u>lunch and hear from faculty on the SRAB about how to get involved in</u> <u>research and about a new research club opportunity!</u>

<u>1:15 to 3:00 Afternoon sessions - Hear more live presentations from</u> <u>students</u>

**PLUS: <u>Asynchronous Presentations</u>. Links will be available on Friday May 6th (through Tuesday May 10th)

View the <u>Presentation Abstracts</u>.



Live Morning Presentations 10am - 12pm

Synchronous presentations are live presentations of scholarly work often guided by slides or other visuals created by the presenter(s). All presentations will take place in Zoom, in one of several breakout rooms. Presentations will occur one right after the other with approximately 10-15 minutes allotted to each presentation. There will be a moderator in each room to keep time. Presenters will share visuals through the share screen feature on Zoom. Observers are encouraged to ask questions and share their comments through the chat. Attendees may enter and exit the room throughout the day as fits their schedule. **Please remain muted when not making a comment or asking a question.**

Presenter(s)	Title	Guiding Faculty	
Breakout Room 1			
Miya Wilson	Language Screening and Linguistic and Cultural Diversity: A Systematic Literature Review	Talita Fortunato-Tavares, Department of Speech-Language- Hearing Sciences	
Miya Wilson	Examining Oral Reading Abilities of a Person with Primary Progressive Aphasia	Mira Goral, Department of Speech-Language- Hearing Sciences	
Bethany A. Rondon	Insatiable An Appetite: A piece of a horror episodic	Monica Duncan, Department of Multimedia Performing Arts	
Dania Miguel	Performance Art: An introduction to multimedia world building	Monica Duncan, Department of Music, Theatre and Dance	
Raquel Nunez	Mental Health Services and Delivery Towards Detained Youth: A Study of Juvenile Correctional Facilities	Jennifer Laird, Department of Sociology	
Breakout Room 2			
Imalay Rodriguez & Joisa Rodas Martinez	Spanish-English Bilinguals with Primary Progressive Aphasia: A Translanguaging Approach to Testing	Mira Goral, Department of Speech-Language- Hearing Sciences	



Lamisha Shah & Andrews Afrifa	Secreted Effectors Modulating Immune Responses to Toxoplasma Gondii	Stephen Redenti, Department of Biology
Amadu Bah	Analysis of Race & Social Identity in the Obama Age: A View from Behind the Veil	Mark Christian, Department of Africana Studies
Yenick M. Gonzalez	Ask the Phoenix: A selection of original poetry	Jennifer Mackenzie, Departments of Journalism and Media Studies & English
Allen Mena	SNAP Enrollment and COVID's Effect on it: Why is it Still High?	Jennifer Laird, Department of Sociology
Blessing Babalola & Ezekiel Olumuyide	The studies on the N-terminal RNA-binding domain of the SARS-CoV-2 Nucleocapsid Phosphoprotein	Manfred Philipp, Professor Emeritus, Department of Chemistry & Janet Gonzalez, Department of Biochemistry, LaGuardia Community College
	Breakout Room 3	
Jeralyn Escamilla	Finding Prenatal Care for Latinas in Mt. Vernon	Alyshia Gálvez, Department of Latin American and Latino Studies
Emmet O'Boy	Connecting Conflict Between Romantic Couples during Overload and Stress Spillover into Professional Settings	Anna Luerssen, Department of Psychology
Scarlyn Perez	Density Functional Theory calculations of self-assembled tripeptides	Gustavo E. Lopez, Department of Chemistry
Samira Mahamadou	Understanding the supply and demand for mental health care among African immigrants in the United States	Jennifer Laird, Department of Sociology
Hanna Rosenstock	DAP5 Function Under Oxidative Stress and its Role in TNBC Metabolism	Columba De La Parra, Department of Chemistry

<u>Keynote Presentation: 12:15-12:45pm</u> Realities of Student-Faculty Collaborations



Presented by: Duran Fiack and Michael Sutherland

Hear about what it is really like to do research with a faculty member from this dynamic faculty/student pair. They will share concrete experiences and outcomes from their work together. Don't miss it!

Lunchtime Chat: 12:45 - 1:15pm

Presented by: Lehman SRAB Faculty

Come join the Lehman SRAB faculty to learn more about research opportunities and how you can connect to faculty conducting research in your area of interest. Also learn more about the Lehman College Level Up Club and their student-faculty mixer coming up on the 11th. This will be an informal chat, so bring your lunch and your questions!

Afternoon Presentations 1:15 pm-3:00 pm

Synchronous presentations are live presentations of scholarly work often guided by slides or other visuals created by the presenter(s). All presentations will take place in Zoom, in one of several breakout rooms, one right after the other with approximately 10-15 minutes allotted to each presentation. There will be a moderator in each room to keep time. Presenters will share visuals through the share screen feature on Zoom. Observers are encouraged to ask questions and share their comments through the chat. Attendees may enter and exit the room throughout the day as fits their schedule. **Please remain muted when not making a comment or asking a question.**

Presenter(s)	Title	Guiding Faculty	
Breakout Room 1			
Chanta Palmer, Aminata Gueye, Persio Jimenez, Kachalya Taylor, & Amone Gellineau	Black, Indigenous, Women of Color (BIWOC) Confront COVID-19 [Panel]	Bertrade Ngo-Ngijol Banoum, Department of Africana Studies	



Paul Loman	Effects of Aerobic Exercise on Language in Individuals with Aphasia	Mira Goral, Department of Speech-Language- Hearing Sciences
Chanta Palmer, Andrea Diaz, Rabi Osumanu, & Jasmine Coppin	Black, Indigenous, Women of Color (BIWOC) Confront COVID-19 [Panel]	Bertrade Ngo-Ngijol Banoum, Department of Africana Studies
Breakout Room 2		
Andres Valcarcel	Facilitating Community-Based Participatory Research: A Strength-Based Assessment of Bronx Based CBOs	Maria Isabel Roldós, Department of Health Sciences & Jaye Jones, Students Affairs CUNY & Institute of Health Equity
Anthony S. Calderon	Lanthanide Luminesce for Bioimaging: Synthesis and Characterization of DO2A-triazolo[3,4-]phthalazine	Benjamin Burton-Pye, Department of Chemistry
Jules Hurn	Holistic, Strategy-Centered Approaches to Vocabulary Intervention in Adolescents	Diana Almodovar, Department of Speech - Language Pathology

Asynchronous Presentations

Asynchronous presentations may take a variety of forms. For example, asynchronous presentations may be posters, pre-recorded panels or solo presentations or artistic performances. Attendees may view these presentations at their own pace. Asynchronous presentations are organized into forums by disciplinary area. Within the forums, each presentation title is included as a discussion thread. Observers are encouraged to ask questions and make comments in the thread. Presenters will interact with observers throughout the conference by commenting in the discussion thread.

How to access asynchronous presentations:

- 1. Click onto the conference website here: https://srabconference.commons.gc.cuny.edu
- 2. Navigate to the student asynchronous presentation tab



- 3. Find the presentation you are interested in viewing and click to open/view
- 4. Leave comments for the presenter, who will monitor their presentations over the course of the next several days

Presenter(s)	Title	Guiding Faculty
Jood Abuali	Ethnopharmacology of Bejuco de Indio (Gouania lupuloides), a Caribbean Medicinal Plant Used for Oral Health	Edward Kennelly, Department of Biological Sciences
Baffour Amponsah-Ant wi	A Machine Learning Model to Predict Confirmed COVID-19 Cases Using Linear Regression	Stephen Redenti, Department of Biological Sciences
Jocelyn Infante Lopez	Communications between mothers and daughters about dating relationships during adolescence	Mia Budescu, Department of Psychology
Carleny Cardoza	The association between mothers' and adolescents' ethnic identity and racial socialization	Mia Budescu, Department of Psychology
Olivia Asher & Ivan Pena	Comparing Dual Restorations in an Urban Park: Twice as Nice?	Jack Henning, Department of Biological Sciences
Erika Nwogu	The Real Race in the White House: An Analysis Barack Obama's Race Speech at the Constitution Center	Mark Christian, Department of Africana Studies
Brittany Stanton	More Than Meets The Eye: Diversity in City Parks	Jack Henning, Department of Biological Sciences
Anthony Mena	Alkaloid Distribution in North American Columbine Species using LC-MS Metabolomics	Edward Kennelly, Department of Biological Sciences
John Soto	SAHA Inhibits Growth of Metastatic Retinoblastoma via Inhibition of MYCN-Mediated FOXM1 Expression	Rajendra Gharbaran, Department of Biological Sciences, Bronx Community College



Lesley Tolentino	Synthesis & Characterization of Polyoxometalates for Applications in Fuel Cell Catalysis	Donna McGregor, Department of Chemistry
Paul Amoako Botang, Sual J. Lopez, & Johanna Bensalel	Comparing The Most Effective Viability Reagents For Human Renal Proximal Tubular Epithelial Cells (HRPTEPiC) Viability And Cytotoxicity.	Julio Gallego-Delgado, Department of Biological Sciences



Presentation Abstracts

Abstracts are listed in alphabetical order by the first name of the first presenter's name

Student Name: Allen Mena

Title: SNAP Enrollment and COVID's Effect on it: Why is it Still High **Abstract:** Food insecurity rates in the U.S surged after the outbreak of Covid-19 in March of 2020 and the subsequent spike in unemployment. The U.S government responded with the expansion of the Supplemental Nutrition Assistance Program (SNAP, formerly known as Food Stamps). However, even with the decline in unemployment as COVID-19 enters the endemic stage, SNAP enrollment has remained high and has not dropped below numbers seen during the early stages of the pandemic. The goals of this study are to conduct a review of SNAP benefits and enrollment determinants and assess how effective these benefits are at relieving food insecurity. The study will also provide policy recommendations about how government assistance programs can better address food insecurity in the U.S.

Student Name: Amadu Bah

Title: Analysis of Race & Social Identity in the Obama Age: A View from behind the veil, Abstract: In this paper presentation, I made efforts to examine Mark Christian's take on the emergence of Barack Obama, as president of the United States. I looked at Christian's observations regarding the huge expectations, for improvements in race relations and institutional adjustments that will bring about more equality and justice in society, as the nation got its first African American president. I also paid attention to the historical perspectives given by Christian, underlining their correlation with challenges faced by the Obama presidency. Moreover, digging into Christian's text, I picked out constructive, critical, and crucial opinions by influential authors, that are highly regarded in the field of Africana Studies and its related fields. These authors made statements about the state of race relations, and its impact on the Obama administration. Furthermore, I considered the critic leveled against Obama, for either not willing or unable, to do enough to create concrete gains for colored people, in their guest for equality and justice in the United States. Finally, I examined Christian's point about the interdependence of the world's population, holding that such interconnectedness is stronger than ever before in human history.



Student Name: Andres Valcarcel

Title: Facilitating Community-Based Participatory Research: A Strength-Based Assessment of Bronx Based CBOs

Abstract: The Community-Based Participatory Research approach (CBPR) is a well-established methodology in health disparities research. Using CBPR principles, this project used SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analysis to assess a sample of the Bronx's Community Based Organization's strengths and health equity work. The literature review suggests that Strength-Based Assessments (SBA) applied to community-based organizations are scarce. The purpose of this project is to ultimately organize a Community Advisory Board for the CUNY Institute for Health Equity (CIHE) and strengthen Lehman's role in the Bronx as an Anchor Institution for community partners.

The methods applied in this project included: obtaining IRB approval to contact CBOs; reviewing CUNY's institutional databases of CBOs in the Bronx; contacting CBOs to verify participation and best contact information; emailing and verifying organizations' invitations and consents, and finally analyzing the SWOT domains. Results: A total of 70 CBOs responded to the initial contact, 42 CBOs participated partially and 34 completed the SBA assessment. Some of the SWOT findings suggest: that strengths lie in youth programs; growth in community adaptability and communication; opportunity: for expansion of services; and threats: lack of physical space and funding. Other significant findings include: 85% have served the Bronx for over 5 years, 88% focus on women as beneficiaries, 30% offer educational and training services, and 56% seek research collaborations. Overall, this work suggests great promise for CBPR and SBA work with CBOs in the Bronx to establish community-academic partnerships with Lehman and CIHE.

Student Name: Anthony S Calderon

Title: Lanthanide Luminesce for Bioimaging: Synthesis and characterization of DO2A-triazolo[3,4-]phthalazin

Abstract: Lanthanide complexes are useful as bioimaging agents due to their long-lived excited states. To take advantage of these properties, lanthanide ions (L^3+) must be completed by a ligand to enhance light absorption. A ligand suitable for this task is a macrocycle called cyclen or 1,4,7,10-tetraazacyclododecane. Cyclen bears 4 nitrogen donor atoms that can be easily modified with more chelating groups to effectively bind lanthanide ions. This is important because lanthanide ions have coordination numbers of 8-10. The appendages serve 2 purposes:

Bind the lanthanide effectively

Can act as antennas to harvest light and increase luminescence emission



One such appendage that has been synthesized in our lab is a triazolo[3,4-]phthalazine. This particular appendage both helps to bind, and sensitize lanthanide emission through energy transfer. Previous studies show that complexes of

DO3A-triazolo[3,4-]phthalazine show good luminescent properties and we want to investigate the behavior of complexes of DO2A-triazolo[3,4-]phthalazine to compare. Removing one acetate arm from the ligand skeleton may provide a free amine site to link to reporter molecules or targeting vectors for imaging applications. Here, the work we present is the synthesis and characterization of DO2A-triazolo[3,4-]phthalazine and its potential uses in bioimaging compared to DO3A-triazolo[3,4-]phthalazine.

Student Name: Anthony Mena

Title: Alkaloid Distribution in North American Columbine Species using LC-MS Metabolomics

Abstract: The genus Aquilegia (columbine) includes many medicinal species that produce bioactive alkaloids. Previous investigations of Aguilegia have reported significant antibacterial and antispasmodic activities. Although valued as ornamental in North America, A. caerulea is also used medicinally for gallbladder disorders and general stomach and intestinal problems. Some North American species have been chemically analyzed and were found to contain bioactive alkaloids such as magnoflorine and berberine. We hypothesize that North American Aquilegia species produce isoguinoline or related bioactive alkaloids that make them useful as medicinal plants. To test this, methanol extracts from all plant parts (flowers, aerial, and roots) of four North American Aguilegia species, A. chrysantha, A. caerulea, A. canadensis var. little lantern, and A. chrysantha var. chaplinei, were prepared. Using liquid chromatography-guadrupole time-of-flight mass spectrometry the alkaloid composition of each species was determined. Orthogonal projections to latent structures discriminant analysis (OPLS-DA), and principal component analysis (PCA) were used for untargeted analysis. The PCA analysis of the flowers shows A. caerulea, A. chrysantha, and A. canadensis var. little lantern to be chemically different, with closer similarities between the latter two species. Further PCA and OPLS-DA analyses of other Aquilegia plant parts are ongoing, as well as marker compound identification.

Student Name: Baffour Amponsah-Antwi

Title: A MACHINE LEARNING MODEL TO PREDICT CONFIRMED COVID-19 CASES USING LINEAR REGRESSION

Abstract: The Severe Acute Respiratory Syndrome (SARS) Coronavirus 2 (SARS-CoV-2), provisionally named 2019-nCoV, but now SARS-CoV-2 according to the Coronavirus Study Group of the International Committee on Taxonomy of Viruses, has



racked a lot of havoc on this planet of ours for a while now. And by a while, it indeed feels like forever, having to live through the harsh realities of the world today and the undulating effects it has had, and still having, on our day-to-day lifestyles. Originating from Wuhan, Hubei Province in China, SARS-CoV-2 belongs to the Coronaviridae family, Betacoronavirus genus, subgenus Sarbecovirus. Its existence has brought with it lessons that must be learnt and measures that must be put in place to either prevent future calamities as such, or to much better manage and to drastically reduce the mind-blowing human casualties and lives that have been lost and negatively impacted due to poorly advised decisions. Reasons like these sparked my interest in developing a machine learning model to predict confirmed COVID-19 cases (Coronavirus disease 2019) in the United States of America and to discuss such matters from a computer science and data analysis background in an effort to encourage more discussion around these matters of urgency and pitfalls of action and inaction. Overall, the aim of my research is to hammer down and raise awareness that we need to be better and do better as a scientific community, bringing about fresh new perspectives on the uprising of COVID-19 and the way forward.

Student Name: Bethany A. Rondon

Title: Insatiable An Appetite: A piece of a horror episodic

Abstract: Insatiable An Appetite (teaser) is a piece of a larger horror-comedy episodic series about an obsessive girl who can't stand her own life so much that she must go out and find another. This piece was shot over three months between the city of Yonkers, the Bronx, and Manhattan. The cast and crew of the project include current Lehman College students and alumni, as well as current NYU Tisch students and alumni. Description: Lili Ramirez has an insatiable appetite for the lives that aren't hers. With all the disdain for her existence it's easy to think that anything could be better. What happens when she finally sees the life that can satisfy her and her needs?

Student Name: Blessing Babalola & Ezekiel Olumuyide

Title: The studies on the N-terminal RNA-binding domain of the SARS-CoV-2 Nucleocapsid Phosphoprotein

Abstract: We described an investigation of NMR-based structures of the N-terminal RNA-binding domain of the SARSCoV-2 nucleocapsid phosphoprotein. These structures were deposited in the 6YI3 pdb file by Veverka, & Boura and were described in (2020) PLoS Pathog 16: e1009100-e1009100. The SARS-CoV-2 nucleocapsid phosphoprotein is of interest because it has been described as a possible drug target that binds both single-stranded and double-stranded viral RNA. The 6YI3 structure features a beta-pleated sheet region and alpha helical components. 40 NMR structures



are present in the 6YI3 structure file, providing considerable variations in backbone and amino acid side chain structures. These variations facilitate the application of computational and molecular visualization tools to observe and measure the dihedral angle backbone movement of the whole domain, as well as by the individual amino acid residues on a bond-by-bond basis. Originally presented at the special symposium celebrating the 50th anniversary of the Protein Data Bank, PDB50, on May 4–5, 2021.

Student Name: Brittany Stanton

Title: More than Meets the Eye: Diversity in City Parks

Abstract: Diversity assessments in urban areas offer the prospect of addressing two empirical laws of ecology associated with the resilience of the areas to perturbation. Species richness increases with increased sampling space, and most sites are composed of a few very abundant species with many rarely encountered species. Currently, NYC parks have been historically disturbed by urbanization, and their diversity has been overlooked because they host a variety of non-native plants. Here, we investigate how NYC parks' diversity findings relate to the two empirical laws of ecology. We sampled trees from three NYC parks: Van Cortlandt Park, Inwood Hill Park, and Central Park using a haphazard technique while analyzing the data results with a Species Area Curve, Rank Abundance Curve, and producing a Neighbor-Joining Tree. We found greater richness and abundance in Van Cortlandt Park and Central Park and greater diversity in Inwood Hill Park. Our findings supported both empirical laws since the species-area curves from each park were still rising. Nevertheless, Van Cortlandt Park did not show a higher abundance based on size, indicating insufficient one-day sampling. Inwood Hill Park, a smaller city park, has greater diversity yet hosts more non-native species, supporting the idea that non-natives can be crucial in serving important ecosystem services and that urban areas can be highly diverse.

Student Name: Carleny Cardoza

Title: The association between mothers' and adolescents' ethnic identity and racial socialization

Abstract: Sharing information about the family's culture is an important aspect for the exploration and affirmation of ethnic identity in adolescents. 71 African American and Latinx families (mothers and their adolescents) were included in a study to examine the associations between parents' and children's ethnic identity, and how it was mediated by racial socialization. We measured levels of ethnic identity in mothers and adolescents. To determine if the exploration and affirmation of ethnic identity was associated with the messages of cultural pride received by parents, we measured two factors of racial socialization: cultural socialization and preparation for bias. We



predicted that levels of ethnic identity would be higher in adolescents whose mothers were born outside the United States. Findings indicate a difference in ethnic identity affirmation between mothers born in or outside the United States being those mothers born in the United States showed higher levels of ethnic identity affirmation. Results from this study show that the mother's affirmation of ethnic identity was associated with adolescent's affirmation of ethnic identity. Results did show significant relationship between mothers' affirmation and adolescents' exploration of ethnic identity. Findings suggest higher levels of ethnic identity affirmation and exploration for girls than boys.

Student Name: Chanta Palmer

Title: "Where Do We Care?: The Topography of Black Women's Self-Preservation and Wellness Across the African Diaspora", Chanta Shenell Palmer, Department of Africana Studies, Lehman College, Bronx, NY.

Abstract: This paper engages the scholarship of Afro-Columbian, Afro-Brazilian, Afro-American and Caribbean Black feminist scholars, how the creation of communities in their geographic locations furthers Patricia Hill Collins' hopes of re-defining of community as a repository for innovative definitions of communities of wellness and self-preservation. In her redefining of the word community Hill Collins work has the potential to further our understandings that communities of wellness can be considered a component of political agendas and systemic racism used to disenfranchise communities of color. I argue that Black feminism in the Afro-Atlantic Diaspora allows for new approaches to addressing social inequality via wellness and self-preservation. My paper will present how to analyze sites of Black Women's Wellness and Self Preservation with a cyclical assessment of place and space that includes Geographies of Power, Communities of Power, Power as Wellness and Self- Preservation, and Wellness and Self-Preservation as Political Power

Student Name: Chanta Palmer, Aminata Gueye, Persio Jimenez, Kachalya Taylor, & Amone Gellineau

Title: Black, Indigenous, Women of Color (BIWOC) Confront COVID-19 **Abstract:** The effects of COVID-19 have permanently changed our global community. The pandemic lays bare intersections of human rights, race, gender, class, as well as ability, age, citizenship, sexuality, and other social constructs. It has disproportionately impacted Black, Indigenous, and People of Color (BIPOC) with preexisting economic, education, housing, and health vulnerabilities, including women and girls in these demographics. Increased gender-based violence has been called 'the shadow pandemic'. The course "Africana women lead through the COVID-19 crisis", examines female leaders' responses to the coronavirus pandemic and has led to the creation of



our two student panels. We have identified, curated, synthesized, and presented in class case studies of incredible women who have found creative ways to help their local and global communities across Africa, and African Diasporas in the Americas. We want to share beyond our classroom these women leaders' transformative work through the lenses of Intersectionality, Human Rights, and Afro-centric Paradigms of Ubuntu/Badenya.

Student Name: Chanta Palmer, Andrea Diaz, Rabi Osumanu, & Jasmine Coppin Title: Black, Indigenous, Women of Color (BIWOC) Confront COVID-19 Abstract: The effects of COVID-19 have permanently changed our global community. The pandemic lays bare intersections of human rights, race, gender, class, as well as ability, age, citizenship, sexuality, and other social constructs. It has disproportionately impacted Black, Indigenous, and People of Color (BIPOC) with preexisting economic, education, housing, and health vulnerabilities, including women and girls in these demographics. Increased gender-based violence has been called 'the shadow pandemic'. The course "Africana women lead through the COVID-19 crisis", examines female leaders' responses to the coronavirus pandemic and has led to the creation of our two student panels. We have identified, curated, synthesized, and presented in class case studies of incredible women who have found creative ways to help their local and global communities across Africa, and African Diasporas in the Americas. We want to share beyond our classroom these women leaders' transformative work through the lenses of Intersectionality, Human Rights, and Afro-centric Paradigms of Ubuntu/Badenya.

Student Name: Dania Miguel

Title: Performance Art: An introduction to multimedia world building **Abstract:** "La Casa de Cuca" bridges the gap between the mystical and tangible worlds. Abstract ephemeral concepts like time, memory and the subconscious are represented and brought into the physical world. In Cuca's world a wooden birdhouse stands as the subconscious mind and a portal to other realms while fabric is used to represent the threads of time. Cuca's story talks of freedom, sacrifice, love and the exploration of memory as a guide to return to ourselves. The story is inspired by Dominican folklore and the legend of Orpheus and Eurydice in Greek mythology. This piece includes self-composed musical scores, live sound experimentation, and a stop-motion film. In this presentation I am discussing how multidisciplinary artists cultivate and build worlds for multimedia performance.



Student Name: Emmet O'Boy

Title: How Stress From Interpersonal Relationships Can Effect an Individual's Work Performance

Abstract: A large body of research explores how stress can spillover from one domain to another, including between an individual's professional and romantic lives (Bolger et al., 1989; Repetti et al., 2009). Often, this research focuses on the impact of work stress on romantic relationships. However, we aimed to determine whether stress from one's romantic life could hinder work performance and whether this spillover is more likely to occur when couples respond to home stress with conflict. To measure this, romantic dyads were placed in a stressful situation where they were overloaded with a variety of tasks which they had to complete in a short timeframe. Tasks were completed individually and together while both were also preparing for a mock job interview. . Each participant then completed the interview. We found when partners felt criticized/blamed by their partner during overload, they reported experiencing more stress during the interview. Additionally, more negative feelings toward the relationship during overload was also associated with more interview stress. There was no association between relationship variables and perceptions of how positively participants thought the job interviewer rated their interview performance or objective ratings of interview effectiveness made by independent judges. Understanding how couples react to stress, particularly with conflict, may help future researchers comprehend the impact a romantic relationship can have on one's work performance.

Student Name: Erika Nwogu

Title: The Real Race in the White House: An analysis Barack Obama's Race Speech at the Constitution Center

Abstract: This paper in is an academic attempt to analyze the choices made in the writing construction of the infamous Race Speech at the Constitution Center made by former President Barack Obama. The author uses heighted energy from very public spectacles of police brutality and the angering sentiments of blacks in America to understand the strategy used by the President to back pedal out of his blackness. The timing in the revitalization of a New Civil Rights Movement has fabricated the notion of being guilty by association in order to criminalize radical movements of blackness. Barack Obama sways from this direction to state his claim as an American and his refusal to be bottlenecked out of his American Dream and systemically be categorized for his color and not of his views.



Student Name: Hanna Rosenstock

Title: DAP5 Function Under Oxidative Stress and its Role in TNBC Metabolism **Abstract:** Aggressive cancer cells acquire an altered metabolism in which they switch from oxidative phosphorylation (OXPHOS) to glycolytic phenotype (The Warburg Effect) to increase metabolic pathways that support growth, proliferation, and metastasis. The highly metastatic Triple-negative breast cancer (TNBC) is characterized by dysregulated metabolism glycolysis. The exact mechanism used in the metabolic switch from glycolysis to OXPHOS is largely unknown. Our data shows that the translation initiation protein DAP5 is involved in the modulation of mRNAs related to metabolism. Under oxidative stress, translation initiation is stopped in normal cells, but when cancer cells are exposed to oxidative stress translation continues and makes aerobic glycolysis favorable. Our data in vitro using MDA-MB -231 and 4T1 TNBC cells shows that DAP5 is resistant to oxidative stress, recreated by exposing the cells to various concentrations of hydrogen peroxide to mimic oxidative stress. This resistance may allow the cancer cells to continue glycolytic metabolism. The mechanism and importance by which DAP5 regulates breast cancer cell metabolism is the focus of our research. Understanding the mechanism of selective regulation that drives TNBC metastasis will allow for the development of new therapies to treat cancers with dysregulated metabolism.

Student Name: Jeralyn Escamilla

Title: Finding Prenatal Care for Latinas in Mt. Vernon

Abstract: In my research presentation poster, I explore how women in Mount Vernon New York find access to prenatal care compared to the surrounding affluent areas such as Pelham, Bronxville, and Scarsdale who have higher levels of education and income. Having these two things opens the door to things like computers, tablets, and phones with internet. Compared to the City of Mount Vernon residents, this may not always be accessible. Having these tools can help gain access to healthcare professionals and information on pregnancy. Through research done by interviews of Latina Women in my community I explore how they find access to prenatal care without things like cellphones, internet, money, insurance and how they overcome language barriers in order to help themselves and their unborn child. I also explore how Latina Women in Mount Vernon use their already gained and passed down knowledge to help their pregnancies. Throughout my research I explore how differences in race, income, levels of education and the number of uninsured people per village and city influence the healthcare levels of Latina women in Mount Vernon.



Student Name: Jocelyn Infante Lopez

Title: Communications between mothers and daughters about dating relationships during adolescence

Abstract: This research paper looked into adolescent and their mother's views on implicit theory and whether or not their views effected how close they were. We tested this hypothesis by determining if adolescent and their mothers had a difference in implicit beliefs. We also wanted to determine if mothers and their adolescents were talking more about dating because their beliefs were the same; we also tested whether or not there was a relationship between the adolescent and their mothers different implicit views and their attachment style. To test this hypothesis, we had sixty complete pairs of mothers and their daughters and had them complete a questionnaire form. The questionnaire measured their implicit theory of romantic relationship using Knee (1998), eight question scale; the questionnaire also used Fraley et al., (2000) twelve item experiences in close relationships scale to determine the participants attachment style. We measured the amount of communication about dating by using the Luerssen (2018) twelve question scale. There was no significant difference between mothers and adolescents implicit theory; this meant that mothers and their daughters had similar views on their implicit theory beliefs. Overall our results suggested that mother and daughters have similar views on implicit theory beliefs and that in households where the adolescents has a higher growth beliefs than their mother, we found the participants talk more about dating than in a household were destiny was higher. Our results also suggested that adolescents had higher levels of anxious and avoidance attachment styles than their mothers.

Student Name: John Soto

Title: SAHA Inhibits Growth of Metastatic Retinoblastoma via Inhibition of MYCN-Mediated FOXM1 Expression

Abstract: I am working with Dr. Rajendra Gharbaran of the Department of Biological Sciences on inhibiting effects of SAHA on the MYCN oncogene and its role in FOXM1 gene expression. Research shows that a downstream link is present between MYCN and FOXM1. However, we are showcasing the effects in a retinoblastoma model. FOXM1 is shown to be responsible for Metastasis, Cell Growth, Chemoresistance, and many other factors. Repression of this gene may change the way we treat certain cancers.



Student Name: Imalay Rodriguez

Title: Spanish-English Bilinguals with Primary Progressive Aphasia: A Translanguaging Approach to Testing

Abstract: According to the National Institute on Deafness and Other Communication Disorders (NIDCD), approximately 1 million people in the United States today are living with aphasia. Aphasia is a neurogenic language disorder resulting from an injury to the brain, a stroke, or a brain tumor. A person with aphasia may have deficits in speaking, reading and writing. There are various types of aphasia which can be classified into fluent aphasia and non-fluent aphasia depending on speech production. However, not all types fit into this classification system. Primary progressive aphasia is degenerative in nature and often irreversible. This study aims to maximize the efficacy of intervention in the face of this impairment. The participants in our study are Spanish-English bilinguals with primary progressive aphasia. We are following a translanguaging model meaning that it spans across an individual's acquired languages rather than focusing only on one of them. Our testing battery is comprised of a variety of tasks that test the participant's ability to name actions and objects, construct sentences, conjugate verbs, form narratives, comprehend verbs and nouns, and respond to questions. The battery was adapted to fit the translanguaging model by presenting words in both English and Spanish on the images and excerpts shown to the participants. In each task the participant is prompted in either language and he or she has the freedom to choose in which one to respond. Challenges arose when translating some words from English to Spanish and vice versa due to differences in cultural norms between countries.

Student Name: Jood Abuali

Title: Ethnopharmacology of Bejuco de Indio (Gouania lupuloides), a Caribbean Medicinal Plant Used for Oral Health

Abstract: Throughout the Caribbean, Gouania lupuloides (L.) Urb. (Rhamnaceae), is commonly used as a chew stick to clean teeth, remove plaque, and massage gums. Previous research has established that G. lupuloides contains antimicrobial compounds that support its traditional use. Gouania lupuloides is frequently sold as bejuco de Indio in Spanish language Caribbean herbal markets (botánicas) in New York City (NYC). However, as with other herbs of commerce, there is a possibility that chew sticks sold as bejuco de Indio are not actually G. lupuloides. The overall aim of this research is to understand the phytochemistry and traditional knowledge of G. lupuloides as it is used in NYC, and to authenticate its botanical identity in commerce. We observed morphological differences between G. lupuloides type specimens and chew sticks sold as bejuco de Indio that may indicate adulteration. Dammarane saponins, such as gouanoside B, which are distinctive of G. lupoloides, have been tentatively identified in



type specimens using ultra-high performance liquid chromatography-quadrupole time-of-flight mass spectrometry (UPLC-QTOF-MS). Principle component analysis of UPLC-QTOF-MS data indicates that at least three of the chew stick samples collected as bejuco de Indio are chemically distinct from G. lupuloides type specimens. Our phytochemical analysis aims to characterize a chemical fingerprint typical of G. lupuloides to aid in the chemotaxonomic identification of unknown chew sticks. Additionally, G. lupuloides extracts are being screened against other microbes related to its other documented medicinal uses in the Caribbean. A small ethnobotanical survey is also being conducted to understand how G. lupuloides, and other herbs of commerce, are used in the NYC area for oral health.

Student Name: Jules Hurn

Title: Holistic, Strategy-Centered Approaches to Vocabulary Intervention in Adolescents **Abstract:** This case study illustrates a Speech Language-Pathology student clinician's approach to vocabulary intervention in adolescents that is holistic and strategy-centered. Dahlia, a 14-year old high school freshman with a receptive and expressive language disorder, received tele-therapy through Lehman College, CUNY, Speech and Hearing Center, 2020-21. Intervention utilized literature-based treatment materials; morphology; semantic mapping; & context clues. Adolescents with language disorders present a unique set of challenges in baselining, setting treatment goals and engaging in effective therapy. One reason is that some children are adept at the use of compensatory strategies to hide their deficits. Additionally, normal social-emotional development in this age group can place unique demands on the clinician/client relationship. A holistic approach that leverages teens' independence, their likes and dislikes, but balanced with relevant, quality language sources will ensure that hearts and minds are engaged.

Student Name: Lamisha Shah

Title: Secreted Effectors Modulating Immune Responses to Toxoplasma Gondii **Abstract:** Toxoplasma gondii is an obligate intracellular parasite that chronically infects a third of humans. It can cause life-threatening encephalitis in immune-compromised individuals. Congenital infection also results in blindness and intellectual disabilities. In the intracellular milieu, parasites encounter various immunological effectors that have been shaped to limit parasite infection. Parasites not only have to suppress these anti-parasitic inflammatory responses but also ensure the host organism's survival until their subsequent transmission. Recent advancements in T. gondii research have revealed a plethora of parasite-secreted proteins that suppress as well as activate immune responses. This mini-review will comprehensively examine each secreted



immunomodulatory effector based on the location of their actions. The first section is focused on secreted effectors that localize to the parasitophorous vacuole membrane, the interface between the parasites and the host cytoplasm. Murine hosts are equipped with potent IFN γ -induced immune-related GTPases, and various parasite effectors subvert these to prevent parasite elimination. The second section examines several cytoplasmic and ER effectors, including a recently described function for matrix antigen 1 (MAG1) as a secreted effector. The third section covers the repertoire of nuclear effectors that hijack transcription factors and epigenetic repressors that alter gene expression. The last section focuses on the translocation of dense-granule effectors and effectors in the setting of T. gondii tissue cysts (the bradyzoite parasitophorous vacuole).

Student Name: Lesley Tolentino

Title: Synthesis & Characterization of Polyoxometalates for Applications in Fuel Cell Catalysis

Abstract: Polyoxometalates (POMs) are anionic polyatomic molecules comprised of early transition metals that are environmentally friendly, reusable, versatile, and tunable. The highly oxidizable transition metals and easily accessible oxygens make POMs excellent redox catalysts with a vast range of applications. Once such application is for the splitting of water to produce the protons for Fuel Cells. Current Fuel Cell catalysis is achieved using platinum, which is expensive and non-renewable. My research is focussed on the synthesis and characterization of three known metal containing POMs that will be tested for applications as fuel cell catalysts. In this presentation I will focus on the synthesis and characterization of a Finke type POM (Na10Co4(H2O)2(PW9O34)2•27H2O, a Lindqvist KNa2[Nb24O72H21]4•107H2O, and a Wells Dawson K15NaP4W35O124{Re(CO)3}2•37H2O (K15Na1•37H2O). Specifically I will present synthetic challenges and characterization using IR and P-31 NMR.

Student Name: Miya Wilson

Title: Language Screening and Linguistic and Cultural Diversity: a Systematic Literature Review

Abstract: Background: Language screening tests for the early identification of language disorders must be free of culturally implicit biases to reduce ineffective cross-cultural or cross-linguistic communication to avoid misdiagnosing children who use different languages, dialects, or are immersed in different cultures.

Aim: This study systematically reviewed published peer-reviewed studies related to linguistic and cultural diversity in language screening tests.



Methodology: Based on the PRISMA 2020 guidelines, systematic research was conducted in bibliographic databases (PubMed, Web of Science, Medline, PsychINFO, Academic Research, CINAHL, and Eric). We used "language disorders" and "speech disorders" keywords while combining them with "screening," "cultural diversity," "cultural differences," "cultural awareness," and "cultural competence." In addition, boolean operators were used to separate "diversity," "awareness," "difference," and "competence" between speech and language disorder search terms. We did not limit our search in terms of years. The inclusion criteria consisted of studies: (1)focused on subjects from birth to six years of age or answers collected from their caregivers (2)peer-reviewed; (3)published in English; (4)related to language screening. The exclusion criteria consisted of: (1)literature reviews; (2)letters to the editor; (3)articles not directly related to language screening.

Results & Discussion: The search resulted in 1,310 studies. Fourteen studies remained after removing duplicates, and inclusion and exclusion criteria were applied. We discuss the research strategies and designs used; assessed communication abilities; representation of cultural and linguistic diversity as participants' demographics (culture, language, and SES); and percentage of adaptation, validation, translation, or creation of new instruments presented in the studies.

Student Name: Miya Wilson

Title: Examining Oral Reading Abilities of a Person with Primary Progressive Aphasia **Abstract:** Background: As part of a larger study, we enrolled a participant with Primary Progressive Aphasia (PPA), a type of dementia that affects language before other abilities. One language ability that has been reported to be impaired is reading, Aim: We wanted to examine oral reading abilities over time. In this presentation, we focus on the participant's reading aloud performance and analyze his substitution, omission, and revision errors.

Methodology: The participant is a Latino male and was 60 years old at the beginning of the testing. He is a Spanish L1 speaker who started learning English at 5 years old. The participant noted that he was highly proficient in both languages before acquiring PPA. He also self-rated English higher than his Spanish. He had 19 years of education and has worked as a teacher. He received a PPA diagnosis in 2020. The testing sessions were conducted in January 2021, July 2021, and February 2022. The participant received 38-40 hours in each of two treatment blocks. Testing included reading aloud excerpts from three chapters of the Little Prince book in English and in Spanish. Here we report on his performance in English and compare his scores across the three testing times.



Results & Discussion: Results of his performance across three testing times over a year and a half will be analyzed. We will be presenting the results in the poster and discussing changes observed over time.

Student Name: Olivia Asher & Ivan Pena

Title: Comparing Dual Restorations in an Urban Park: Twice as Nice? Abstract: Van Cortlandt Park is NYC's third largest public park, located in the Bronx, and contains urban woodlands and playing fields. Using the park as a proxy, we explored Gilliam's suggestion that most of the diversity in Northeastern forests is contained within the herbaceous layer by comparing restorations between two sites in the park that received different treatments, one cleared using the herbicide, RoundupTM (Site 1), and the other, cleared by hand (Site 2). We compiled data on woody and herbaceous plants from both sites before and after renovation. Pre-renovation (year 0), the sites were wooded and contained many non-native trees with a low diversity of herbaceous species. New trees were planted following partial clearing of non-natives. Immediately post-renovation (year 1), Site 1 exhibited a higher diversity of herbaceous species than it had pre-renovation. The overall abundance of plants in Site 2 increased post-renovation, but the diversity of plants did not increase. However, in Site 1, herbaceous diversity decreased again in year 8, to levels lower than the pre-renovated condition. Both sites had novel herbaceous species appear that were not accounted for pre-renovation. This suggests the park contains a seed bank of taxa no longer represented in the mature woods, some of which were state-listed. Urban parks like VCP serve as refugia for native species in urban environments. Our results suggest that different methods of restoration result in different outcomes. Understanding how restoration affects the diversity of urban parks can help guide future efforts to maximize the success of native species.

Student Name: Paul Amoako Botang, Sual J. Lopez, & Johanna Bensalel **Title**: Comparing The Most Effective Viability Reagents For Human Renal Proximal Tubular Epithelial Cells (HRPTEPiC) Viability And Cytotoxicity.

Abstract: Malaria is a parasitic mosquito-borne disease that is caused by a parasite of the genus Plasmodium. It is one of the top five diseases killing children under the age of 5 years old. Therefore, the production of anti-malarial drug is a necessary to combat this infection. In the process, viability of cells is checked for using viability reagents. PrestoBlue is a resazurin based reagent which identify viable cells by conversion of resazurin to resorufin. AlamarBlue is observed to work similar to PrestoBlue. WST is a tetrazolium salt-based reagent where viable cells convert these salts into formazan by cellular mitochondrial dehydrogenase. Absorbance was measured for each of these



assays at an hourly interval of incubation for 4 hours, and their values were compared. We analyze which reagent gave the best reading upon increasing concentration of cells in different sections of the well plate. PrestoBlue gave the best absorbance in a 2-hour span compared to alamarBlue and WST-1 assay.

Student Name: Paul Loman

Title: Effects of Aerobic Exercise on Language in Individuals with Aphasia **Abstract:** This presentation is part of a study which considers the effect of aerobic exercise on the ability of several individuals with aphasia to perform language tasks. Participants were administered traditional language interventions along with aerobic exercise. To measure the effect of treatment, participants were asked to answer simple questions (e.g., "What did you do before coming here today?") using one sentence at baseline, at intervals following each of two treatment blocks, and at follow-up, as well as other measures. Their responses were transcribed and scored based on sentence complexity, grammaticality, coherence, and percentage of correct information units (CIUs). This presentation considers the performance of one participant across five testing times to examine the possible impact of the treatment.

Student Name: Raquel Nunez

Title: Mental Health Services and Delivery Towards Detained Youth: A Study of Juvenile Correctional Facilities

Abstract: This research is an investigation of mental health needs and services provided to detained youth in juvenile correctional and detention facilities. Specifically, I examine how these needs and services vary with respect to mental health symptomatology, traumatic histories, risk of recidivism, and gender. Researchers have found and recognized detained and recidivating youth as a high risk population where the mental health services in which they receive have been a point of discourse for several years now. However, one prevalent concept that is present within the research of this population is the phenomenon of gap-gazing, where there is much emphasis on the problems present within the system and facilities through the lens of white, cisgender male researchers. Another prevalent concept present within this form of research is the lack of sufficient, available recommendations of intervention or active examples of soluble interventions that will target mental health needs among detained youth and lower the rates of recidivism for returning youth within the juvenile justice system. I discuss alternative models of youth detention, and I provide policy recommendations for better meeting the needs of youth within the criminal justice system.



Student Name: Samira Mahamadou

Title: Understanding the supply and demand for mental health care among African immigrants in the United States.

Abstract: The objective of this study is to understand the supply and demand for mental health care among African immigrants in the U.S. Recent research indicates that many African immigrants in America have limited access to mental health care facilities or receive relatively low-quality care for their mental disorders. Drawing from qualitative interviews with first and second generation African immigrant college students, I document unmet mental health needs that are exacerbated by shame and stigma within the African immigrant community. While I find that African immigrant students look to their religion as a therapeutic source, I also document positive effects from being treated by U.S. providers. Prior research has identified certain norms and practices among doctors who treat immigrant populations - practices such as allowing patients who are clearly struggling with mental health problems to seek help from family and religious leaders. I argue that these practices are unjust and they can potentially put patients at risk of further pain and suffering.

Student Name: Scarlyn Perez

Title: Density Functional Theory calculations of self-assembled tripeptides **Abstract:** Histidine (H) and aspartic acid (D) are promising building block for short aromatic peptides containing a proton donor/acceptor moiety. Previous studies have shown that polyalanine peptides substituted at regular intervals with histidines exhibit structural stability and high proton affinity. Moreover, it has been shown experimentally that tripeptides can self-assemble into macroscopic ordered structures. Here we present first-principle calculations of tripeptides HHH, HDH, HHD and DHH, and show that they are able to form H-bonded networks mimicking proton wires with the ability to shuttle protons via the Grotthuss shuttling mechanism. The formation of these wires enhances the stability of the systems. In all cases the tripeptides exhibit high proton affinity and their potential energy curves indicate that the proton transfer barriers are on the order of 1~9 kcal/mol. Thermodynamic cycles are used to understand the entropic and enthalpic contributions to the stability of tripeptides. This work will take the form of a scholarly presentation of original work.



Title: Ask the Phoenix: A selection of original poetry

Abstract: These poems are excerpted from my master's thesis, titled "Ask the Phoenix". In this collection, I revamp older poetic traditions from the 19th and 20th centuries to reflect and flex the love that I have for these forms. The arc of my work climbs from the past into the present to articulate my journey to self-awareness and acknowledgment of the spaces I move in and affect. It shows how my education and experiences have taken me full circle, by having me confront my past to be able to move forward. The reconstruction of poetic tropes works in tandem with my growth and self-expression. Many of the poems use negation to reject and dismantle harmful stereotypes and false authorities that plague many African Americans and the Latinx communities. The forms I invent confirm my intuition and constitute; my re-education and revision of my own experiences in ways that center my subjectivity and ability to interpret the codes of poetry in contemporary modes.