THE CALIFORNIA PRE-DOCTORAL PROGRAM

2018-19 SALLY CASANOVA SCHOLARS

Sonoma State

San Diego State

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I AM A CSU SALLY CASANOVA PRE-DOCTORAL SCHOLAR

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For the past 30 years, the California State University’s (CSU) Pre-Doctoral Program has granted the Sally Casanova scholarship to over 2165 low-income and educationally disadvantaged students throughout the CSU, the majority of whom are first-generation college students. For the 2018-19 academic year, 72 new scholars will join this group representing 15 of the 23 CSU campuses.

The California Pre-Doctoral Program is designed to increase diversity within the pool of university faculty by supporting the doctoral aspirations of students in the CSU—with particular support for low-income and educationally disadvantaged students. Awardees of this scholarship represent juniors, seniors, and master’s level students who come from a variety of academic disciplines. Each of these scholars are mentored by a faculty member from their respective campus.

The scholarship provides the Sally Casanova Scholars with:

- An opportunity to travel with their mentor to various University of California (UC) and other doctoral granting institutions for site visits;
- Attendance at national symposia, or professional meetings, exposing them to their field of interest; and
- Memberships in professional organizations, subscriptions to academic journals, or
- Purchasing of supplies necessary to carry out their current research agenda.

In addition, these scholars are offered an opportunity to participate in a summer research experience at any doctoral granting institution in the United States, with particular emphasis on the UCs. This eight-week program gives the scholars direct exposure to doctoral-granting faculty and research, preparing them for entry into doctoral programs.

This booklet provides an overview of the 72, 2018-19 Sally Casanova Scholars and their research interests.
Jesus’ research interests are the mechanisms of language in underserved populations. To comprehend the complex processes involved in language, he is investigating mental processes, including perceiving, thinking, believing, problem solving, remembering, and decision making to further explain the importance of language. Jesus is interested in how immigrants who speak a foreign language are sometimes criticized for not speaking the dominant language. This can cause stress and anxiety that could hinder immigrants’ motivation to contribute or participate in their community. He hopes to create a project that intertwines language with solving difficult cognitive dilemmas. This could potentially demonstrate the need for an increase of immigrants who can potentially participate in economic, political, and cognitive issues. Many issues today require complex problem solving, and a diversity of perspectives can contribute to the development of new solutions.

Mariela’s work utilizes biotechnology and chemical engineering to develop products and processes that help improve human health and benefit the environment. Her most recent project focused on improving cell culture media used to produce therapeutic monoclonal antibodies from Chinese hamster ovary cells. In fed-batch processes, media is an essential factor for cell growth and protein quality. Different amino acids derivatives resulted in improved media stability and contribute to improved cell viability. Her master’s project investigates alternative catalysts used for biodiesel production that are cost-effective and environmentally friendly. It is difficult in commercial production to recover and reuse the highly alkaline catalyst currently used, resulting in hazardous waste generation that requires further treatment for safe disposal. The development of less hazardous catalysts with comparable activity, can help develop a safer and more cost-effective biodiesel production method.
Cristina Alcaraz

Cristina is investigating the survival strategies employed by microbial communities residing in permafrost. For her Masters’ thesis project, Cristina has chosen to focus on a particularly important aspect of microbial community function, antibiotic resistance. Antibiotic resistance is ancient and occurs naturally among soil-dwelling microbes. Antibiotic resistance genes are involved in community signaling, environmental sensing and play a role in competition and defense interactions. The microbial communities residing in permafrost exist in an environment that has never been exposed to synthetic antibiotics. This offers a unique opportunity to study antibiotic resistance strategies unaltered by anthropogenic effects. Global warming is escalating temperatures in the Arctic causing wide-spread permafrost thaw, microbes that were once sequestered in ice will be integrated into the emerging ecosystem, making knowledge of their genetic potential essential.

B. Gabriela Arango

Gabriela is an ocean lover and a scientist in training. Her main research interest is physiological adaptations for breath-hold diving, specifically those of sea turtles. Despite their delicate status— all of the seven extant species are currently listed in The IUCN Red List of Threatened Species— relatively little is known about their diving physiology. Currently, she studies the aerobic dive capacity of sea turtles, a critical feature in determining plasticity of foraging behavior and the ability of individual turtles to respond to changes in prey distribution and ocean climate. Gabriela’s research also provides a starting point to create predictive models of predator-prey interactions and to understand how physiology constrains their diving behavior. With this information, scientists, conservationists, and policy-makers may improve ocean conservation efforts. To continue her research, she would like to merge genetics and physiology and compare the diving evolutionary adaptations between mammals and reptiles.
Daisy Avila

Faculty Mentor: Dr. Xuan Santos
Campus: California State University San Marcos
E-mail: avila053@cougars.csusm.edu
Grade Level: Master’s 1st Year
Expected Date of Graduation: Spring 2020
Major: Sociological Practice

Daisy’s research focuses on the lived experiences of formerly incarcerated folk and what are the structural barriers they face when navigating social services. She seeks to explore how formerly incarcerated persons are inadequately and unjustly acknowledged within institutions that pride themselves on student success and diversity. Her graduate work aims to examine the everydayness of re-entry students, who live in legally-mandated treatment centers and grassroots community centers. Daisy seeks to explore how they transform into resilient agents as they navigate the processes for seeking health, housing, educational, legal, and employment services in the stages upon release. As a scholar her work seeks to inform public policy on [in]justice in the service sector work within institutions of higher learning. She is interested in exploring alternative resources and frameworks rooted in critical, popular education and prison-to-school frameworks.

Inayah Baaqee

Faculty Mentor: Dr. Jeff Cookston
Campus: San Francisco State University
E-mail: ibaaqee@mail.sfsu.edu
Grade Level: Master’s 2nd Year
Expected Date of Graduation: Spring 2019
Major: Developmental Psychology

Inayah is interested in studying the psychological outcomes associated with structural inequality and oppression (i.e. discrimination and economic disadvantage). As a graduate student, she is examining the developmental outcomes influenced by implicit bias in education. Stereotype threat, a psychosocial phenomenon, offers an explanation for the underperformance of underrepresented minorities and occurs when the awareness of stereotypes and fear of confirming stereotypes induce threat, which consequently undermines performance. Stereotype threat disproportionately impacts individuals belonging to highly stereotyped groups (e.g. African-Americans, females in STEM) who are especially susceptible to stereotype threat in academic environments. For her master’s research, she has developed an evidence-based intervention program for third-fifth grade elementary school children intended to promote resilience to stereotype threat, implicit bias, and discrimination. The intervention program is one of the first of its kind to be administered to elementary school children and may influence structural innovation in primary-level education, especially for racial/ethnic minorities.
Kelsey Patricia Baird

Faculty Mentor  Dr. Bob Roberts  
Campus  California State University San Marcos  
E-mail  kelseypbaird@gmail.com  
Grade Level  Senior  
Expected Date of Graduation  Spring 2019  
Major  Sociology, Critical Race Theory  
Doctoral Study Field of Interest  Social Sciences

Kelsey Baird is investigating the social correlates of mental health/illness in resettled refugee communities—a group shown to be at elevated risk of developing severe mental health problems. Her specific focus is on how diagnosis and treatment norms in the U.S. and Canada are experienced and understood by resettling refugees, their larger communities of origin and resettlement, and mental health professionals providing services. Her work explores how these experiences shape and are shaped by dominant norms of diagnosis, categorization, and treatment. Kelsey has presented her research internationally and is a 2018-2019 recipient of the Killam Fellowship awarded by Fulbright Canada, enabling her to study and conduct research in Toronto in Spring 2019.

Esteban Bautista

Faculty Mentor  Dr. Taeboem Oh  
Campus  California State University, Northridge  
E-mail  ebautista.elac@gmail.com  
Grade Level  Senior  
Expected Date of Graduation  Spring 2020  
Major  Biochemistry  
Doctoral Study Field of Interest  Sciences

A molecular machine can be defined as “an assembly of a distinct number of molecular components that are designed to perform machine-like movements (output) as a result of an appropriate external stimulation (input)”. Broadly speaking, Esteban is interested in researching nanotechnology for the development and advancement of health through synthetic molecular machines. Interests include the delivery of therapeutics and cells, attack of cancer cells, and increasing the functionality of other molecular machines. With advancements in molecular machines, the field of nanomachines will eventually evolve into nanorobotics. This entails advanced functions compared to their nanomachine, rudimentary counterparts. Molecular machinery is still in its early stages and further developments need to be made in order to increase their efficiency, speed, and capabilities.
Katherine Bernal

Faculty Mentor  Dr. Gitima Sharma
Campus  California State University, Fresno
E-mail  keakate92@mail.fresnostate.edu
Grade Level  Master’s 2nd Year
Expected Date of Graduation  Spring 2019
Major  School Counseling
Doctoral Study Field of Interest  Social Sciences

Katherine’s research focuses on improving school counseling to increase equity and access to education for minority and underserved student populations. Her current investigation for her Master’s thesis examines the barriers that undocumented Latino/a high school students face, which impact their educational success as they transition into higher education. It analyzes the actions of schools now and evaluates new ways of providing the proper resources to students. The literature is in dire need of assessing the tools that are currently available to school counselors in aiding undocumented students that are college-bound. More resources need to be made accessible for Latino/a undocumented students, so they have equal chances of completing their educational aspirations. Through in-depth interviews of school counselors in the California Central Valley area, Katherine hopes to gain understanding of the social, emotional and academic difficulties undocumented students experience and translate it into school counseling programs that can be implemented throughout American high schools.

Jewel Bourne

Faculty Mentor  Dr. Dimpal Jain
Campus  California State University, Northridge
E-mail  jewelbourne@ucla.edu
Grade Level  Master’s 2nd Year
Expected Date of Graduation  Spring 2019
Major  Higher Education Leadership Program
Doctoral Study Field of Interest  Education

Jewel’s research focuses on the experiences of Black female-identifying students as they navigate the community college transfer pipeline. In particular, she examines the racial transfer gap for Black and African American women who transfer from community college to a baccalaureate granting institution. She aims to fill a gap in the literature through analyzing and documenting the narratives of these women to provide research that is instructive for student services praxis. Jewel’s research is informed through her personal and practitioner experience with assisting underserved transfer students in the Los Angeles area. As a future doctoral student, Jewel aims to explore the intersections of race, gender and class in higher education and advance diversity and equity practices.
Mariana Bruno

Faculty Mentor: Dr. Margie Brown-Coronel
Campus: California State University, Fullerton
E-mail: mbruno@csu.fullerton.edu
Grade Level: Master’s 3rd Year
Expected Date of Graduation: Spring 2019
Major: History
Doctoral Study Field of Interest: Humanities

Mariana’s research explores the diversity and resiliency of a historically multiethnic enclave in the city of Santa Ana, known as Artesia Pilar, located in Orange County. This research employs an oral history methodology to collaborate with the community in reclaiming a historical narrative that is inclusive of those left in the margins of history. Conducting oral histories with neighborhood residents offers a deeper understanding about the ways individuals give meaning to the place they inhabit and create a community of possibilities. By utilizing community cultural wealth as a framework, Mariana’s work examines how culture is utilized by residents to navigate the social, political, and economic landscape of society in order to overcome adversity and maintain control of their lives. This collection of oral histories will feature residents, artists, business owners and formal city workers.

Ngoc-Cam Bui

Faculty Mentor: Dr. Ezequiel Morsella
Campus: San Francisco State University
E-mail: ngoccam.bui@gmail.com
Grade Level: Master’s 3rd Year
Expected Date of Graduation: Spring 2019
Major: Social Psychology
Doctoral Study Field of Interest: Social Sciences

The psychological sense of agency is the sense that one is responsible for mental, physical, or social interactions with the world. The concept of agency is a basic tenet of societal laws and structure, yet assumptions about agency are not based on scientific observations. Cam (pronouns: they/them) is interested in basic consciousness and how the brain processes different elements of action control in social contexts in order to infer agency. They are currently conducting experiments to explore how agency may be modulated by unintentional mimicry and by incidental aspects of the environment. Cam aims to explore the implications of these results towards the understanding of personal and collective responsibility and accountability in their doctoral studies.
Teagan Bullock

Teagan’s research interests are at the intersection of psychological phenomena and bioethical issues, specifically in application to mental health treatment. Clinical issues are complicated by the assessment of mental capacity undermining the patient’s right to autonomy, resulting in an aversion to treatment. She intends to use philosophical models to improve our understanding of the rationality behind value judgements made by individuals with substance use disorder, and refine the ethical criteria for undermining a patient’s right to autonomy. This interdisciplinary perspective aims to illuminate the effect of increased respect for patient autonomy on the outcomes of rehabilitative treatment.

Jorge Cabrera

The intersection of immigration policy and mental health have come to the forefront due to current anti-immigrant sentiment in the United States. Immigration policies -- such as travel bans, border walls, and family separation -- impact the wellness and behavioral health of millions of people, specifically in states with high number of immigrant communities. Jorge’s research interests include policy, law, and immigrant children and families. Jorge is currently working on research focused on the access and utilization of health care services among undocumented children and their families, resilience among high-risk adolescents, and young adult’s definitions of health. His research is intended to inform policy decisions and help improve the holistic health of immigrant families.
Dennis is currently working with his faculty mentor, Dr. Amy Furniss, as part of the Very Energetic Radiation Imaging Telescope Array System (VERITAS) collaboration. VERITAS is a telescope array made up of 4 12m Cherenkov telescopes operating at the Fred Lawrence Whipple Observatory (FLWO) in southern Arizona. VERITAS is sensitive to sources from 100GeV to 10TeV. The VERITAS observatory effectively compliments the NASA FERMI mission. He is studying the gamma-rays that are emitted from blazars, which are a type of galaxy with an Active Galactic Nuclei (AGN). Blazars have a jet of relativistic particles shooting out from its AGN oriented towards the Earth. As part of the research team, he analyzes the spectra of these blazars to learn more about this phenomenon which can potentially lead to new physics.

Juan’s research focuses on drug-related violence in Mexico. In one paper on the topic, Juan empirically assesses the causes and consequences of mayoral assassinations. Drawing on a novel dataset of Mexican states between 2005 and 2017, this work shows that competition among different political parties across multiple levels of government (federal and state) makes it difficult for security institutions to protect mayors from being assassinated by drug trafficking organizations (DTOs). In another paper, Juan builds on existing theories of civil war and insurgency movements to examine the interaction between oil reserves and DTO violence in Mexico. Specifically, he demonstrates that DTOs steal oil from PEMEX (Mexico’s state-owned petroleum company) to fund strategic operations against their adversaries. Juan is applying to doctoral programs in political science with a specialization in comparative politics and international relations.
Angela’s research is focused on the characterization of proteins involved in vesicular trafficking of Legionnaire’s disease. Legionnaire’s disease is an atypical pneumonia caused by a freshwater bacterium, Legionella pneumohila, that attacks macrophages in the lung. It utilizes a Type IV/DotIcm secretion system to recruit vesicles to the phagosome and evade degradation. Specifically, Angela’s research explores an effector protein, YlfA, and its involvement in L. pneumophila’s entrance into the cell through the endocytic pathway. She investigates this through binding and protein assays that analyze the binding interactions with a known protein in this pathway, Rab5. The overall goal of her research is to contribute to the development of a possible mechanism for the Type IV/DotIcm secretion systems so that emergent pathogens that utilize the same mechanism can be further understood.

Natalya is intrigued by complex human disease mechanisms such as Human Papilloma Virus infections (HPV), Diabetes 1, and Autism. She is particularly interested in understanding the genomics behind disease causation, and in developing personalized treatments. She aims to implement both experimental and computational methods to address “what networks are involved in the modulation of immune responses in HPV related cancers?” or “How can genetic and phenotypic heterogeneity of neurodevelopmental disorders be better understood?” Natalya has already participated in research projects involving from clinical studies of newborn’s heart health to computational approaches in vaccine development and autism. She is currently gaining research experience in computational biology and bioinformatics by addressing evolutionary questions about speciation.
Daniela Carreon

Faculty Mentor | Dr. Christopher Bickel
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Campus | California State University San Marcos
E-mail | daniela.carreon@gmail.com
Grade Level | Senior
Expected Date of Graduation | Spring 2019
Majors | Social Sciences, Ethnic Studies
Doctoral Study Field of Interest | Social Sciences

Daniela’s research interests include sexuality, performance, and representation of masculinity, along with violence within the context of the Chicano familia. She will explore the different platforms of media representation of cis and trans-Chicano/xs, critiquing the representation and performance of masculinity conducted by men in conscious raising spaces. Other interests include, but are not limited to emotionally and mentally absent Latinx immigrant mothers and their effect on their first-generation children. Often times immigrant parents need to work an endless amount of hours and at times are too stressed, tired and/or are emotionally unavailable for their children. There is a gap in the literature, absent mothers are not studied nor are the effects of intergenerational trauma, intergenerational poverty, and resilience that they and/or their children may encounter.

Steven Carrisále

Faculty Mentor | Dr. Kristi Eastin
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Campus | California State University, Fresno
E-mail | stivicarr1@mail.fresnostate.edu
Grade Level | Senior
Expected Date of Graduation | Spring 2019
Major | History
Doctoral Study Field of Interest | Humanities

Steven’s research focuses on political identity in fifth-century Athens, especially that of naturalized citizens. He seeks to understand how Democratic Athens dealt with immigrant populations in its political system, an interest which stems from his being a first generation American himself. Recent scholarship on Greek ethnic identity (Jonathon Hall, Ethnic Identity in Greek Antiquity), multi-ethnic identity of the Mediterranean and especially that in the Pireaus, i.e., the port city of Athens (Denise Demetriou, Negotiating Identity in the Ancient Mediterranean), further informs this work. A firm foundation in historical method and training in classical philology provide the bases for these investigations. Steven seeks to further his work in a doctoral program, in order to discover what impacts recently enfranchised immigrants had on the politics of Athens and the impact being an Athenian citizen had on immigrants. Such work will contribute to scholarship on the role of immigrants participating in the classical democracy.
Dalesy Casasola

Faculty Mentor  Dr. Enrique Ochoa  
Campus  California State University, Los Angeles  
E-mail  gcasaso@calstatela.edu  
Grade Level  Senior  
Expected Date of Graduation  Spring 2019  
Major  Latin American Studies  
Doctoral Study Field of Interest  Social Sciences

Dalesy seeks to produce ethnographic research necessary to build counter-narratives during a time of escalating xenophobia. She is currently focused on documenting histories of Central American migrants living in Los Angeles that threaten to be fragmented or otherwise lost to continued displacement. The US is home to a growing Central American diaspora that has been largely ignored by the American public. This invisibility has recently been disrupted by polarizing national discourses on migration influx and transnational criminal organizations. Dalesy’s line of inquiry examines sociocultural wealth and the ways xenophobia and criminalization intersect with the gentrification of transnational communities. As an undergraduate, Dalesy has presented at academic and community spaces, including the state-wide 31st Annual CSU Student Research Competition in 2017. She hopes to continue working through her oral history research for a better understanding of Central Americans’ position and future within US society.

Tsz Chan

Faculty Mentor  Dr. Joseph Gubeladze  
Campus  San Francisco State University  
E-mail  timmyc@mail.sfsu.edu  
Grade Level  Master’s 3rd Year  
Expected Date of Graduation  Fall 2018  
Major  Mathematics  
Doctoral Study Field of Interest  Sciences

Timmy is interested in studying discrete geometric objects at the crossroads of several disciplines – integer programming, algebra, and combinatorics. Integer programming is crucial in attacking problems of optimization, which in turn is used in finance and engineering. Timmy is studying a conjecture, recently proposed in a research paper, which is known to be true only in special cases. He computationally verified the conjecture in several cases, not accessible to theoretical tools. The project is a blend of sophisticated mathematics and computer assisted extensive computations. He is planning to use the skills used in this work to pursue research related to the application of mathematics to build technology for education. He works alongside math education researchers on curriculum design for freshmen level remedial courses. Timmy is interested in ensuring equitable access to technology for math education. He is applying to PhD programs in Math Education, Computer Science and Applied Mathematics.
Paul Choi

Paul is interested in cognitive and quantitative psychology. He is interested in gaining a better understanding of how our memory, emotion regulation, and decision-making processes are affected when stressors elicit different levels of valence and arousal. He is also interested in using advanced statistics to better understand the psychometric properties of cognitive assessments. His current master’s thesis is investigating how heart rate variability (HRV) biofeedback can affect one’s well-being. More specifically, he is examining how daily HRV biofeedback for a month can affect anxiety levels, emotion regulation strategies, and recall of memory. Paul is also passionate about creating academic achievement programs for all types of underrepresented students and diverse populations (e.g., students who have speech impediments, identify with the LGBT community, and are academically struggling).

Jonathan Coil

Jonathan is interested in combining behavioral and physiological psychology to understand how social forces are embodied into physical manifestations. Jonathan is currently exploring what messages young men, who grew up in the foster care system, receive about gender. This is particularly pertinent given that research shows that foster youth change homes, on average, seven times, without regard to the stages of cognitive and physical development. The question that Jonathan asks in his research is what messages are they receiving, when, and how are they using this information for identity formation? While this topic lies within the realm of social psychology, Jonathan wants to eventually research the interaction between physiological psychology and social psychology at a doctoral program in the future. He wants his research to complement the production of policy by accounting environmental inputs on human development.
The human mind experiences time as more flexible than suggested by today’s precisely regulated clocks. Seeking to understand this troubled relationship with temporality, Francesca is studying the representation of time in the poetics of the Early Modern and Victorian eras. In literature that predates the discovery of quantum mechanics, general relativity, and the fMRI, science cannot serve as an explanatory refuge for the mind’s intrinsic ability to bend time. Poetry offers a flexible space for the portrayal of alterations in perception. A particular focus is tachypsychia, a feeling of time slowing down, often generated by traumatic events. Recognizing these experiences of temporal strangeness as neurologically based, Francesca hopes to add to the understanding of neuroaesthetics and temporal subjectivity. Additional work, which has been presented at national conferences, includes gaze theory applications, prosody, and feminist approaches to sonnet studies, focusing on the effects of amatory sonnet conventions on the female voice.

Vivien Enriquez

The study of microorganisms and their influence on animal hosts is an exciting and leading area of research in biology. Microorganisms, such as bacteria, viruses, and fungi, dominate the natural world in terms of sheer abundance and are consistently offering new insight into their role in animal development, health, and behavior. Vivien is interested in exploring questions related to how microorganisms influence characteristic host behavior and survival by using a model system, the Hawaiian bobtail squid and its bacterial symbiont Vibrio fischeri. To investigate these questions, Vivien has reared both colonized and uncolonized squid and conducted behavioral observations and cognitive studies, such as learning and memory tests, throughout multiple stages in the squids’ development.
Nancy’s research interests include transnational identity and solidarity; women and student movements; globalization; visual and print culture; and Central America-U.S. relations. She is currently working on a research project that examines the 1980s Los Angeles and El Salvador solidarity movement through political graphics, magazines, newspaper articles, and government documents. Nancy is curating her research into a pop-up exhibit in the hopes of piecing together an often overlooked part of Los Angeles history that continues to influence its cultural landscape and to engage with the Salvadoran community that flourished, and continues to flourish, from the aftermath of the Salvadoran Civil War. Her on campus leadership included editor in chief of Perspectives, Vol. 44 and past president of the campus chapter of Phi Alpha Theta, the national history honor society.

Celeste is interested in investigating academy training practices and education (or lack thereof) officers receive and law enforcement field practices. Celeste pursues this research project to investigate whether the former has an effect on the latter and the extent of the effect. In other words, Celeste wants to determine whether academy training (the type and content) influences whether law enforcement engages in best practices (such as community policing) with all community members, or malpractice with some groups. This investigation is relevant given the historical and ongoing police violence and racial profiling that fills jails and prisons with black and brown faces. Given the limited research exploring a relationship between academy training and police practices, Celeste is very excited to pursue this important work which she hopes will advise on training practices that would lead to an increase in law enforcement engaging in best practices.
## Wilma Figueroa

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Wilma Figueroa is a NIH-BUILD research scholar. She has worked with two research labs: one focusing on adiposity among Latinx children, and the other using an ecological approach to examine substance use among young adults. She has authored and co-authored manuscripts examining prescription stimulant misuse and prescription stimulant avoidance self-efficacy. Wilma participated in the 2018 Summer Research Program in Epidemiology at Harvard T.H. Chan School of Public Health, and led a study using data from the National Ambulatory Care Survey from 2005-2015 to identify correlates of antibiotic prescribing for Group A Streptococcus pharyngitis. As a doctoral student, Wilma aims to continue addressing gaps in literature to further understand the multi-level and multifactorial determinants of chronic diseases and substance use.

## Alice Gavarrete Olvera

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Working memory is the ability to store and manage information over short periods of time. Measures of working-memory capacity are strongly related to performance in other complex cognitive tasks such as executive function, which are cognitive processes that cognitively control behavior. Alice’s Master’s thesis project studies how ethnicity is related to executive function and working memory neuropsychological tasks by comparing Hispanic and Caucasian group performance on these measures. Her findings may lead to understanding how the differences in performance may be attributed to cultural differences such as acculturation, which is the process of an individual assimilating into a dominant culture. Currently, she is recruiting participants and collecting data for her thesis project. She will defend her thesis in the Spring. As a doctoral student, she aims to continue exploring acculturation as well as bilingualism, aging, and dementia.
Isaac Gendler

Building off his Summer Internship at Lawrence Berkeley National Laboratory, Isaac is currently working on a joint Berkeley Lab-San José State University research project investigating Passive Cooling Methods for Building Integrated Solar Photovoltaics. When solar panels become too hot, they drastically lose efficiency, and keeping them at regulated temperatures is critical to the broad proliferation of distributed and renewable energy resources. The results of this research will be vital for much of the developing world, whose proximity to the equator, rapidly expanding population, and emerging dependence to electricity means that we will have to find ways to adopt sustainable and resilient critical infrastructure while dealing with the impinging effects of our warming climate. Isaac’s doctoral research will expand on this work in mitigating the effects of climate change into an interdisciplinary Engineering-Policy doctoral program.

Talin Gharibian

Talin is examining the relationship between mental health and cultural identity among persons of Middle-Eastern descent. Existing literature suggests that immigrants face migration-related stressors that may cause or exacerbate poor mental health outcomes. Moreover, recent waves of immigrants and refugees from the Middle East face compounding stressors, given that current sociopolitical conditions have caused many to flee from war, instability, and violence. Disparities in care put them at greater risk of untreated disorders. Talin’s graduate capstone study will explore the culturally influenced mental health attitudes and experiences of this population. In addition, she hopes to examine the ways in which collective trauma, such as the Armenian Genocide and occupation of Palestine, may impact the mental health outcomes of subsequent generations. The findings intend to inform a greater understanding in both research and practice, expanding culturally competent treatment and improving their quality of care.
Carlos’ research focuses on mitochondrial protein Adenylate Kinase 4 (AK4) and the biological effects brought about by AK4 protein expression levels. His previous research identified that loss of AK4 enhanced the activation of the energy and nutrient sensor AMPK and the regulator of metabolism mTOR. These two proteins are normally antagonists of each other. It becomes important to understand the concurrent activation of AMPK and mTOR in order to define the biological consequences of cellular proliferation and metabolic stress adaptations in response to altered AK4 expression. Carlos’ hypothesis is that dual AMPK and mTOR activity initiates biological effects promoting proliferation and metabolic stress adaptations that benefit cells. To test this, he will be performing RNA interference targeting AK4, developing CRISPR-Cas9 cell models knocking out AK4, and measuring cellular metabolism, proliferation and survival rates in nutrient complete and nutrient deprived conditions.

Jesús’ research centers primarily upon the documentation of highly endangered languages. In 2016 Jesús initiated a new research project on an endangered language variety from Oaxaca, México called Santa Ana Zegache Zapotec. In collaboration with Professor Michael Galant, Jesús presented findings on the phonological adaptations and stratification of Spanish loanwords borrowed into this Zapotec language variety. In the summer of 2018, Jesús participated as a student research intern at the University of Arizona. Under the supervision of Professor Wilson Silva, Jesús was assigned a case study to participate in a language documentation project of Desano and Siriano, two endangered Eastern Tukanoan languages of South America. Jesús created a web user interface to disseminate a selection of stories from the Desano and Siriano language communities using ELAN and LingView software. Additionally, Jesús’ research interests include a cognitive sciences and applied linguistics approach to the study of first and second language acquisition.
Gemayel Goxcon

As current political climate intensifies around topics of unauthorized migration and Deferred Action for Childhood Arrivals (DACA), a unique opportunity is exposed for understanding the lived experiences of those with marginalized identities. In his master’s thesis, Gemayel focuses on the experiences of LGBTQ members who are also DACA beneficiaries. By using qualitative methods, this research investigates how individuals occupy, perceive, and experience spaces. Gemayel is especially interested in gaining insight on how these members, who hold intersecting identities, make sense of their world in a higher education environment. He aims to answer these questions using photo-elicitation methods, where the participants produce and discuss photographs of places that are frequented and meaningful in their everyday life. This research hopes to shed light on the way individuals perceive and negotiate spaces in relation to their intersecting identities.

Syphong Ha

In recent years, medical professionals have hypothesized that one indication of epilepsy may be the desynchronization of the two pacemakers that reside within the right and left hemisphere of the brain. This desynchronization should be apparent in a clean EEG, but due to the chaotic nature of the waveform, it is uncertain whether this desynchronization exists or not. Evidence of this desynchronization does not mean that an individual has epilepsy, since there are numerous causes that contribute to this disorder. However, being able to see the desynchronization clearly is important because it can help to better determine the likelihood that an individual is epileptic. Therefore, Syphong’s research will comprise of processing and analyzing EEG signals in order to see if this phenomenon is apparent.
Jeffrey Harris

Jeffrey’s research will examine the bioarchaeological differences between pre and post contact indigenous communities on Brazil's Atlantic coast to better understand the impacts of European colonialism on the indigenous societies. His work in bioarchaeology may enhance history and deepen our understanding of Brazil's past societies. The human skeletons can tell the history of our lives, not just the stories of our deaths, because they are shaped by cultural and environmental influences throughout our lives. This research will reconstruct their health and well-being along with the history of demography, disease, social inequalities, social violence, and environmental challenges in societies throughout the world, from past to present. His research will help reveal the demography and social history of indigenous peoples on Brazil's Atlantic coast through the period of colonial conquest. Understanding native-lived experiences of Euro-American colonialism is intrinsically necessary in understanding the complexities in our global society today.

Faculty Mentor  Dr. Brenda Bowser
Campus  California State University, Fullerton
E-mail  jharrismac@gmail.com
Grade Level  Master’s 2nd Year
Expected Date of Graduation  Spring 2020
Major  Anthropology
Doctoral Study Field of Interest  Humanities

Joe Louis Hernandez

Joe looks to expand the current conversation surrounding historically marginalized populations in higher education. His interest centers primarily on students of color who have been directly impacted by mass incarceration and their lived experience. He seeks to develop an understanding of how these students can tap into the knowledge created from their experiences and its application in post-secondary education fostering persistence and resiliency. Additionally, he wants to illuminate what strengths these students already possess that helped them succeed. Finally, and importantly, Joe’s research will add a voice to this scholarship from the perspective of someone who has experienced incarceration first hand.

Faculty Mentor  Dr. Shametrice Davis
Campus  California State University, Long Beach
E-mail  joelouish@gmail.com
Grade Level  Master’s 3rd Year
Expected Date of Graduation  Spring 2019
Major  Counseling, emphasis Student Development in Higher Education
Doctoral Study Field of Interest  Education
Sarah is primarily interested in psychosis and personality disorders. Currently, she is using a zebrafish model of schizophrenia to research the effects of novel drugs. In the future, she hopes to expand her research to other populations, such as mice, rats, and people, to further understand new, effective treatment options for people suffering from psychosis-related disorders and personality disorders.

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Sarah Hernandez

Victoria’s focus is on the nexus between physics and ecology. The interplay of the physical and biological pervades life at all scales. It determines internal physiology, from the pulsatile pumping of the heart to the fractal branching of vascular systems. It occurs at the organismal level, from dinosaurs co-opting feathers and forelimbs into airfoils for flight, to marine mammals collapsing their rib cages and shunting oxygen into tissues for deep dives. These interactions also occur at the ecological level, and this is exciting new scientific territory. While ecologists often study interactions among organisms, many of life’s greatest hurdles are physical. For example, how might the increasing intensity of storm breaks affect the survival of invertebrates in intertidal zones? Victoria’s focus is on the ecological mechanics connecting lifeforms to their physical environment, which in turn shape organismal evolution, govern population dynamics, and determine the functioning of ecosystems.

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Victoria Hickman
Joshua’s master thesis will seek to integrate and expand on the “transversal politics” framework in multi-ethnic coalitions and alliances. Too often, activist research has low focus on how multiracial alliances perpetuate between minority groups, as well as movements with intersecting issues like environmental justice. Joshua hopes that by exploring local multi-ethnic coalitions, he will provide a richer perspective on interracial relations, opening more dialogue on creating cross-issues movements as well as conceptualize and identify new linkages. Joshua aims to explore the issues of race/ethnicity, activism, and community engagement as a doctoral student. He has a passion for addressing issues of social inequality and challenging oppressive socio-political structures in the fields of Sociology and Ethnic Studies.

Monica’s research interests include investigating low-dimensional materials for electronic devices. Following her undergraduate career, she hopes to enter a Ph.D. program in materials science concentrating her studies on improving technologies for more efficient and environmentally-friendly energy generation and storage. The necessity for high rates of energy conversion for electrochemical devices today make it imperative to understand new materials with desirable properties, such as highly luminous wide-bandgap materials. Monica seeks to apply her current understanding of energy generation from chemical processes to applications such as nanotechnology and devices.
Shayna’s current research focuses on psychological functioning and academic outcomes of college students recovering from substance abuse. In the future, she would like to focus on the societal influences of the opioid epidemic within the nation, as well as global implications. Her interdisciplinary research is influenced by perspectives from human services, which focuses on micro-level outcomes (mental health & overall well-being), in sociology (societal influence) with a macro-level lens, and in health science (rehabilitation accessibility for POC) with a population-based perspective. This leads to her interest in substance abuse recovery methods and community-based prevention and intervention of substance abuse rehabilitation, and occurring treatment modalities.

Gesean wants to explore how genuine friendships with animals can be crucial for the social development of people with autism. Many adults with ASD desire friendships but end up living very socially isolated lives outside of their families. Because of this many opt to getting a pet and that pet becomes their primary source of friendship and community. But what if having a pet could be a catalyst for the development of social abilities that are needed for building human relationships? Gesean suspects that making a genuine social connection with an animal can be a precursor to forming genuine social connections with other people. To investigate these questions, Gesean plans to conduct a qualitative study that examines relationships between adults on the autism spectrum and their pets within the context of their everyday life experiences.
**Gema Ludisaca**

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Gema’s research interests include popular culture, young adult literature, and the Gothic genre. She has presented her ongoing research on the Harry Potter series at a cross institutional conference hosted by the University of Pennsylvania and is working on revising a manuscript that will be published in Pathways: A Journal of Humanistic and Social Inquiry. Gema is currently using a psychoanalytic framework to look at the way in which Gothic elements in the series represent larger cultural anxieties and the way these reflect a socio-political unconscious and trauma history. In her doctoral research, Gema will further analyze the intersection of Gothic elements and themes of race and cultural identity in both 18th century and contemporary literature. She will also research the role of gothic fandoms in young adult literature and the way that these have evolved from traditional gothic traditions.

**Kimberly Madrigal**

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Kimberly’s research examines how the educational, professional, familial, and personal experiences of Latinas shape their pathway towards academic deanship. A question she is currently exploring is what are ways to navigate and overcome challenges that Latinas may encounter in their pathway to higher education administration? She is also interested in the educational struggles of the Chicano/Latix community, the challenges of Latina/o higher education administrators and faculty, the challenges of women of color professoriates, the sociology of education, racial and gender microaggressions on college campuses and its trickle-down effect on educational policies and reform. Kimberly’s undergraduate thesis examines the lack of Latina academic deans in California universities.
Hannah’s research centers around youth, deviance, and popular culture. Specifically, her current research focuses on the social media competency and experience of social service workers working with youth at risk for commercial sexual exploitation in the foster care system. As the number of commercially sexually exploited children in our nation’s foster care system continues to grow, Hannah is interested in looking at the ways in which social media has emerged as a new pathway to exploitation. Her research serves to inform policy in the foster care system regarding the ways in which we can address this rapidly evolving medium to best serve youth in care. Her work also examines the ways in which popular culture, specifically music, transmit messages regarding transactional sex to youth. She was recently selected as an HSI Pathways/Mellon Student Fellow and is scheduled to present her research at the University of Pennsylvania Cross-Institutional Conference in May.

Gloria is examining the relationship between motivational factors and positive mental health in historically relegated populations. Through support from the NIH Rise MS-to-PHD Graduate Fellowship at California State University Los Angeles, she discovered the importance of having a myriad of cultures represented in science and the difficulties shared by many minorities in pursuit of doctoral degrees. As president of her campus’s chapter of Psi Chi, the International Honor Society in Psychology, she sought to advocate for research and mentorship opportunities for undergraduate students. In line with these experiences, she is examining the role of gratitude and resilience in academic achievement among Latino and African American college students. Her past research has also focused on investigating the synchronous construction of online and offline patterns of usage and its relationship to risk taking behavior.
Christina Mu

Lorelay Mendoza

Lorelay Mendoza

Faculty Mentor: Dr. Natalie Mladenov
Campus: San Diego State University
E-mail: lorelaymendoza@gmail.com
Grade Level: Senior
Expected Date of Graduation: Spring 2019
Major: Environmental Engineering
Field of Interest: Engineering

Lorelay is investigating the use of optical sensors to detect sewage inputs to surface waters. Contamination events occur from activities that include leaking sewage pipes and storms that wash human wastes from the urban environment into surface waters as runoff. During recent decades, fluorescence spectroscopy has been utilized as a tool to rapidly study sources and transformations of organic matter in the natural environment. Lorelay deploys a portable fluorometer in urban waterways during rain events and also while conducting controlled sewage spills in the lab. She examines the relationship between fluorescent peaks and markers of anthropogenic activity. Lorelay’s results may lead to the advancement of real time water quality monitoring.

Christina Mu

With a focus on the rapidly growing aging population, Christina’s research investigates age-related changes in cognition and the impact of engaging in activities in later life. Ultimately, she seeks to improve the quality of life for both healthy and chronically ill individuals. During the summer of 2018, Christina produced and presented original research at the University of Arizona studying executive functions in older adults. Currently, she is working to complete her McNair thesis on the impacts of social support on pain catastrophizing tendencies and quality of life in adults over 50 experiencing chronic pain. She has gained valuable research skills such as administering and scoring neuropsychological tests and realigning brain images. Christina hopes to build on her acquired skills to further her studies in other facets of aging such as attitudes on death and dying, caregiver stress, and improving palliative care, especially for those suffering from long-term or terminal illnesses.
Thao plans to study Vietnamese Communist women from 1954 – 1990 as their narratives relate to the Vietnam War and the Cold War. His goal is to interrogate the means by which women’s sacrifices were exploited and then forgotten. By analyzing records from the Vietnam National Archives (Ho Chi Minh City) and the Archives of the Ministry of Foreign Affairs (Hanoi), he will trace the narratives of women of Southern Vietnam who engaged in international diplomacy and the narratives of rural women of Northern Vietnam to understand the complexity of mobilizing women through Communist Party rhetoric. This research aims to reinvigorate historical discussions of gender within the context of the Vietnam War.

Duy’s research interest is about Maxwell’s equation and its applications to modern science. Vector calculus is developed to understand magnetism or electricity and fluid flow in one coherent frameworld. At the Ph.D level, he will continue to enhance knowledge and research applications of Maxwell’s equation in order to find new method to predict its behavior and generalize its mathematical models and formulas. Duy wants to find out if there is an efficient way to construct hydroelectric dam (such as where to place the motors, the turbine, etc.) and maximize its total amount of energy per minute. It is useful because the energy that it releases is clean, renewable with unlimited resources and zero pollution. In order to understand its operating principle and create a more effective way to operate hydroelectric dams, Duy must acquire more knowledge and experience in the study of fluid dynamics and electrostatic field in the future.
Alonso’s work broadly focuses on three main philosophical questions: a) the historical and philosophical analysis of scientific practice and the evolution of its concepts, b) what social mechanisms (e.g. group work, funding, politics) and cognitive processes (creativity, cognitive values, etc.) are at play during scientific practice, and c) how episodic memory, narrative theories, and attentional processes affect the construction of the self. Inspired by the work of Kuhn, Alonso believes that scientific progress is not a straight line that gets us closer to the truth, nor an accumulation of discoveries, observations, or experimental results. Instead, scientific progress is a competition for a more adequate conception of the world between opposing theories, different paradigms, societal factors, individuals with their own epistemic goals, and chance. His goal is to increase our understanding of how scientific discoveries occur and how social and personal components, including self-identity, influence and inform our scientific practice.

Adoril Oshana

In his previous research, Adoril studied minority stress and its impact on sexual minorities (who are characterized by having a non-exclusively heterosexual identity, by reporting same-sex attractions, and/or by engaging in same-sex behaviors). Regarding sexual minorities, the minority stress model indicates that fear of rejection, sexual orientation concealment, internalized homophobia, prejudice, discrimination, stigma, and violence are all potential stressors for the aforementioned community. As a result of these chronic stressors in their social environments, sexual minorities are at increased risk for mental health concerns. Given that the model may be adapted to reflect the stressors of other communities of minority status, Adoril is broadly interested to see how certain biases, stressors, and/or acts of discrimination affect minorities specifically in the context of a workplace. He is currently conducting an undergraduate honors thesis to investigate the intersectional effects of sexual orientation, race, and behavioral expressions on job performance evaluations.

Alonso Reategui

Alonso’s work broadly focuses on three main philosophical questions: a) the historical and philosophical analysis of scientific practice and the evolution of its concepts, b) what social mechanisms (e.g. group work, funding, politics) and cognitive processes (creativity, cognitive values, etc.) are at play during scientific practice, and c) how episodic memory, narrative theories, and attentional processes affect the construction of the self. Inspired by the work of Kuhn, Alonso believes that scientific progress is not a straight line that gets us closer to the truth, nor an accumulation of discoveries, observations, or experimental results. Instead, scientific progress is a competition for a more adequate conception of the world between opposing theories, different paradigms, societal factors, individuals with their own epistemic goals, and chance. His goal is to increase our understanding of how scientific discoveries occur and how social and personal components, including self-identity, influence and inform our scientific practice.
David J. Robles

Faculty Mentor: Dr. Ramani Durvasula
Campus: California State University, Los Angeles
E-mail: droble32@calstatela.edu
Grade Level: Master’s 2nd Year
Expected Date of Graduation: Spring 2019
Major: Psychology
Doctoral Study Field of Interest: Social Sciences

David has presented original research at national conferences describing associations between psychosocial processes, substance use disorders (SUD) and psychiatric diagnosis (PD) in persons living with HIV/AIDS, with a focus on underserved communities and related behavioral health disparities. His master’s thesis is an exploration of health symptoms, personality and substance abuse in persons living with and at risk for HIV. As a doctoral student, he aims to explore health disparities and associations between psychological mechanisms and intersecting environmental, social, economic, and genetic risk factors in SUD and PD. Furthermore, he intends to pursue research on therapies for SUD and PD with socioeconomically and ethnically diverse communities. David’s passion is for reducing the impact of substance abuse and psychiatric disorder among stigmatized and underserved communities by addressing both individual and structural level factors.

Raul Rodriguez

Faculty Mentor: Dr. Marion Beach
Campus: San José State University
E-mail: m.ed.raulrodriguez@gmail.com
Grade Level: Master’s 2nd Year
Expected Date of Graduation: Spring 2019
Major: Counselor Education
Doctoral Study Field of Interest: Education

Raul is interested in conducting research on mental health and educational inequity, which is a measure of lack of achievement, fairness, and opportunity in education. His master project focuses on the relationship between mental health and the academic achievement of Latino male university students. Raul has a passion for promoting culturally competent counseling and addressing issues of educational inequities. Specifically, he hopes to explore how the mental health of Latino male university students is affected and may also perpetuate educational inequities; such as the educational opportunity gap, inaccessibility of four-year universities for underserved communities, as well as lack of ethnic and gender diversity amongst university faculty.
Ariana plans to pursue a doctoral degree in Higher Education. Her passion for pursuing a graduate degree in this field is guided by her lived experiences both professionally and personally as an educator and a student. Her research interests focus on college pathways, first-generation and low-income students, peer mentorship, and Hispanic Serving Institutions (HSI). Her current work explores the experiences of transfer students of color in science, technology, engineering, and mathematics (STEM) who attended HSIs. Specifically, she is focusing on how peer mentoring influenced the academic trajectories of these students and the ways in which institutional agents and student support programs help to facilitate positive peer interactions. As a scholar-practitioner, she aims to build a body of meaningful research and mentor young scholars with the intent of increasing the presence of currently underrepresented groups in academia.

Arlene has presented research at national and international psychological conferences focusing on the impact of gender normative pressures and cultural values on educational aspirations among young Latina women. Her master’s thesis will focus on the influence of culturally-related gender role attitudes on graduate stress and impostor phenomenon among Latina graduate students. This work will allow her to comprehend the inter-sectional experiences of bi-cultural Latina women in Los Angeles as they navigate cultural and gender-related issues while making career choices and continuing their education. Her overall research aim is to investigate the mental and physical factors that contribute to a higher retention and graduation rates of Latina students in STEM. She is passionate about increasing the rates of Latina women who pursue higher education in the sciences and plans to return to the CSU system as faculty member to help diversify science and academia.
### Angela Schoch

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Angela is currently exploring the frightening realities of the gothic literature; far from mere set dressing, the gothic literary mode often engages with shifting cultural anxieties. Research in gothic studies often intersects with postcolonial and feminist theoretical approaches, utilized by scholars to frame “otherness,” constraint, and resistance in the experience of disenfranchised populations. At present, Angela is editing an article for publication in the Autumn 2018 issue of the Irish Journal of Gothic and Horror Studies; her article discusses the connections between the gothicization of the Welsh language (Cymraeg) in mid-Victorian educational reports and occult interactions in the short stories of Arthur Machen. She is also researching the Indigenous Gothic aesthetic in modern novels for a project that will be published through Palgrave Macmillan; specifically, she will explore the use of Indigenous folklore and the interaction of modern Indigenous gothic writing with early settler “captivity” narratives.

### Kadellyn Sandoval

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Kadellyn’s research interest is in understanding how inhibitory neurons, also known as interneurons, develop during the perinatal period, a time immediately before and after birth. Her work in a lab recently described migration of interneurons into the infant frontal lobe during the first few months of life, a phenomenon not present in the mouse. As current animal models do not fully recapitulate the processes present in the human brain, Kadellyn’s project is developing a gyrencephalic animal model, the domestic pig, to examine perinatal human cortical development. She will examine the distribution of inhibitory neurons migrating in the perinatal cortex and identify their origins, migratory routes, and potential association with high risk autism genes. Her project will result in an extensive characterization of late migrating interneurons in the perinatal pig cortex.
Stress during pregnancy has negative health outcomes for mothers and their infants. Therefore, investigating ways to attenuate stress during this vulnerable time is crucial. Olivia is currently studying stress biomarkers and perceived stress for low-income women and their infants during the pre- and postnatal period. Her thesis research entitled: Maternal Mindful Disposition, Alpha Amylase, Cortisol, and Perceived Stress: A Longitudinal Analysis on Maternal and Infant Stress Response, focuses on the role of mindfulness, or one’s ability to maintain present moment awareness on multifaceted stress responses. Her research aim conceptualizes stress by investigating various pathways, including: the hypothalamic pituitary adrenal axis, the sympathetic adrenal medullary axis, and perceived stress. As a doctoral student, Olivia hopes her research will one day 1) expand current knowledge of mind-body interventions for pregnant women, 2) outline biological outcomes associated with mindfulness during pregnancy and, 3) increase mind-body prevention programs in clinical settings.
It is hypothesized that adipose tissue plays a critical role in the progression of coronary artery disease (CAD). While much research has been completed, a direct relationship between adipose tissue, the underlying vasculature, and CAD progression has not been established. Michael’s thesis research is focused on understanding the behavior of unique adipose tissue depots in patients with coronary artery disease. What lends novelty to Michael’s research is that he is characterizing the behavior of perivascular adipose tissue surrounding the left internal mammary artery, an artery that is resistant to atherosclerosis development and is commonly used as a graft in coronary artery bypass grafting surgery. Of particular interests are the relative mRNA/microRNA expression and protein secretion levels of subcutaneous adipose tissue, epicardial adipose tissue, and perivascular adipose tissue. Michael’s future research interests include vascular biology, community health education, and metabolic syndrome prevention research.
Benjamin Soto

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Ben investigates the potential effects an aqueous garlic (Allium sativum) extract and its odorous compound, Allicin, may have on challenged mouse macrophage cytokine production. Macrophages are key cells for the innate immune response; upon detection of microbes, macrophages release cytokines. Cytokines are signaling proteins utilized by the cells of the immune system to direct responses. To test this, macrophages are challenged with lipopolysaccharide (LPS), a molecule on the outer membrane of gram negative bacteria, or heat-killed Candida albicans, a major microbe in hospital borne infections. Data suggests that garlic’s effects are dependent on both challenge and cell line dependent in our comparison of primary and immortalized cells. Ben is also interested in questions regarding cell fate determination, specifically related to sex determination and germ cell formation; how developmental mechanisms select cell-specific programming and how cells maintain their determined fate throughout an organism’s lifespan.

Mai Spaulding

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Mai’s research focuses on studying the benefits of bitter melon extract in insulin-resistance, particularly on the regulation of gluconeogenesis, a key metabolic pathways. A human liver carcinoma cell line (HepG2 cells) is used for this study. If the benefits of bitter melon can be proven through her study, people with diabetes may be able to manage their glucose homeostasis by consuming this fruit. This research is closely related to the knowledge she would like to gain in the future by understanding metabolic pathways that occur in the human body in relation to macro and micro nutrients. Ultimately, she aims to apply these findings to help improve people’s health and nutrition. She believes that dietary improvements should be regarded as the first stage of preventive care and treatment in combatting diseases because there are fewer side effects involved in changing one’s diet.
**Wayne Swinson**

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One in ten married couples in the US over the age of 30 struggle with infertility or have problems getting pregnant. Thirty-percent of infertility cases are a result of paternal inheritance or male infertility factors, and a majority of male infertility cases, forty to fifty-percent, are a result from unknown causes. To fill gaps in knowledge, our lab studies chromatin remodeling during spermatogenesis in the model organism C.elegans. Wayne’s current master’s thesis employs next generation sequencing to quantify changes in gene expression at key sperm sites during HTAS-1 binding, a core H2A histone variant. It is not fully understood how histone variants directly alter DNA accessibility in germ cells after they replace core canonical histones but, histone variant exchange influences transcriptional networks and likely has epigenetic consequences in the developing sperm and embryo.

**Modje Taavon**

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<th>Faculty Mentor</th>
<th>Dr. Michael Bryson</th>
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<tbody>
<tr>
<td>Campus</td>
<td>California State University, Northridge</td>
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<td>E-mail</td>
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<tr>
<td>Grade Level</td>
<td>Master’s 2nd Year</td>
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<td>Expected Date of Graduation</td>
<td>Spring 2019</td>
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<tr>
<td>Major</td>
<td>English Literature</td>
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<tr>
<td>Doctoral Study Field of Interest</td>
<td>Humanities</td>
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Focusing on the ways in which Arabic and Persian poetry are mistranslated into English and often surreptitiously truncated for publication, Modje’s current research project advocates for the preservation and integrity of the literature and intellectual history of the Near and Middle East. Her work examines how poetry in translation navigates the politics of language at three levels: the way language expresses ideas in the source language, the way those ideas are presented by scholars in the target language, and the way the poetry is received and analyzed by critics. Language matters, and it is her contention that accurate and honest translation is the cornerstone of literary scholarship. By comparing the original poems to their English translations, she questions the extent to which literary scholarship plays a role in taming and subduing resistant voices and in determining who is permitted full and honest access to such points of view.
**Elizabeth “Anele” Villanueva**

Broadly, Michelle’s area of research interest is in philosophy of mind, consciousness, and attention. Her work closely examines Susanna Siegel’s theory of inference and the upgrading and downgrading of experience; Carlos Montemayor and Harry Haroutioun Haladjian’s account of attention and consciousness; and the work of Ernest Sosa, Ned Block, Alex Byrne, Daniel Dennett, and David Chalmers. Her Masters’ thesis project centers on questions regarding how closely related consciousness is to attention, how independent these processes are from one another, and what is the precise theoretical structure of their relationship. She aims to show that the answers to these questions have far reaching implications for cognitive science, psychology, and artificial intelligence. She is interested in showing how a deeper understanding and clear theoretical model of the human mind can help us find answers for a variety concerns from supporting trauma survivors to ethical problems in deep machine learning.

**Michelle Thomas**

Anele’s research project explores dual language learning in young children and the unique characteristics of parent-child interactions from infancy to preschool-aged children across various linguistic backgrounds. She currently investigates executive function (i.e., attention control, cognitive inhibition, and memory) in English-speaking monolinguals and Spanish-English bilingual children. Additionally, she examines the characteristics of parent-child interactions in Spanish- and English-speaking parent-child dyads from San Diego, CA. She aims to further study Spanish-speaking parent-child dyads from Mexico City to learn how culture, socioeconomic status, and immigration status may affect a child’s expressive vocabulary. Anele aims to focus on early language development and bilingualism in low-income immigrant families in her graduate work. Specifically, she plans to explore parental dual language input in immigrant families with young children, develop parent-centered interventions, identify caregiver strengths, develop assessments that meet the needs of bilingual children and promote culturally-sensitive ways to communicate with young children with communicative disabilities.
Jonathan's training in statistical and epidemiological research includes diabetes prevalence and trends among Asian Americans, including the examination of disparities across various Asian sub-ethnicity groups (e.g., Chinese, Japanese, Korean, Filipino, South Asians, Vietnamese), in the context of generational differences and acculturation. For this project, he is providing statistical support to analyze California Health Interview Survey data including descriptive statistics, bivariate analyses, and multivariate regression modeling. Jonathan is also looking at work with focus groups of young and middle-aged Pacific Islander adults and care providers to examine barriers and facilitators for access to mental health resources among this community. In addition, he is managing primary data collection for a study using a cross-sectional survey instrument examining addictive behaviors, including screen time activities, among a diverse sample of college students. Jonathan is currently writing his master's thesis on social, emotional, and academic support as a hypothesized moderator between childhood parental incarceration and early adulthood mental health outcomes.

Jazzmyn is currently working on exploring community violence exposure and ethnic identity in ethnic minorities. Currently, in Dr. Meeta Banerjee’s Contextual Aspects of Race and Ethnicity (C.A.R.E.) lab, Jazzmyn is investigating neighborhood characteristics such as community violence and its relationship to parent ethnic-racial socialization practices among ethnic minority families. This work is imperative in beginning to understand the role of community violence on the development of youth racial identity. Additionally, her thesis will look at exposure to community violence and parent-child agreement on reports of exposure. She wants to continue to contribute to this exploration of how trauma affects the black community, and help develop intervention strategies to mitigate its effects. Future directions for her research plan to examine trauma exposure distribution among black and ethnic minority populations. In particular, Jazzmyn is interested in looking at variations of trauma, prevalence and mental health implications.
THE CALIFORNIA PRE-DOCTORAL PROGRAM

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The California Pre-Doctoral Program staff. From left to right: Christopher P. Murphy, Diversity Programs Administrator; Lauren Dalupan, Program Coordinator; Dr. Maridith A. Janssen, Director.