



GRADUATE SCHOOL  
OF ARTS AND SCIENCES  
COLUMBIA UNIVERSITY

The GSAS Office of Academic Diversity  
welcomes you to the 28th annual

## **Summer Research Program Symposium**



Wednesday, July 20, 2016  
9:00 a.m. - 3:00 p.m.

555 Lerner Hall  
Columbia University

Welcome to the Research Symposium for the Graduate School of Arts and Sciences 2016 Summer Research Program (SRP). This year, 15 undergraduate students from different colleges and universities from across the country have taken advantage of this opportunity to conduct original research with Columbia's and Barnard's distinguished faculty.

The goal of the SRP program is to increase the presence of individuals from traditionally underrepresented groups among the faculties of U.S. colleges and universities. The work presented at this symposium represents the research conducted during the nine weeks that the students are in residence at Columbia. By introducing the students to the joy and rigor of graduate level work, we hope to encourage and help prepare them to attend graduate programs in their chosen field.

We would like to thank the Graduate School of Arts and Sciences, the Leadership Alliance, the Creating Connections Consortium (C3), and the National Science Foundation for supporting our 2016 SRP Fellows. A special thank you to the Columbia professors at both the Morningside and uptown campuses, Barnard College, graduate students, and post-doctoral fellows for giving their valuable time to work with the students this summer.

## 2016 SRP STAFF AND MENTORS

### Program Director

S. Isabel Geathers, Assistant Dean for Academic Diversity

### Faculty Mentors

Niall Bolger, *Psychology*

Thomas Diacovo, *Cell Biology*

Farah Jasmine Griffin, *English*

Shamus Khan, *Sociology*

Ana Pauline Lee, *Latin American and Iberian Cultures*

Duncan Menge, *Ecology, Evolution and Environmental Biology*

Shayoni Mitra, *Theater*

Celia Naylor, *History*

Brendan O'Flaherty, *Economics*

Robert Shapiro, *Political Science*

Carla Shedd, *Sociology*

Josef Sorett, *Religion*

Hynek Wichterle, *Neuroscience*

### Graduate Student Mentors

Anayvelyse Allen-Mossman, *Latin American and Iberian Cultures*

Claudia Becerra, *Cellular, Molecular and Biomedical Studies*

Bailey Brown, *Sociology*

César Colón-Montijo, *Music*

Brittany Fox-Williams, *Sociology*

Geoffrey Iwata, *Physics*

Sandra Portocarrero, *Sociology*

Viviana Rivera-Burgos, *Political Science*

## PROGRAM SCHEDULE

- 9:00 - 9:15 a.m.            **Welcome**
- 9:15 - 10:30 a.m.        **Science Cohort Presentations**  
J. Gabriel Fraley  
Ashley Rector  
Karen Gomez
- 10:30 a.m. - 12:00 p.m. **Humanities Cohort Presentations**  
Kevin Quin  
Mysia Anderson  
José Gabriel Figueroa Carlé  
Elyza Dottin  
Jasmine Wilson
- 12:00 - 1:00 p.m.        **Lunch**
- 1:00 - 3:00 p.m.        **Social Science Cohort Presentations**  
Jordan Baker-Tealer  
Alijah Futterman  
Hana Gebremariam  
Juan Contreras  
José Herrera  
David Curtiss  
Pascual Cortes-Monroy Edwards
- 3:00 - 3:05 p.m.        **Closing Remarks**

## RESEARCH ABSTRACTS

**J. Gabriel Fraley**

**Faculty Mentor: Professor Hynek Wichterle**

*Optimizing the Directed Differentiation of V2a Interneurons from Mouse Embryonic Stem Cells*

Amyotrophic Lateral Sclerosis (ALS) is characterized by the degeneration of motor neurons that causes rapid atrophy and eventually paralysis of the muscles. ALS exhibits a rapid disease progression that can lead to death within two to four years after diagnosis. The  $\alpha$ -motor neuron pool is the most vulnerable in ALS and evidence suggests the degeneration in these motor neurons may be caused by abnormalities in either synaptic inputs themselves or the presynaptic neurons. One such known excitatory input that synapses directly onto motor neurons is from V2a interneurons. Aberrant firing properties of the V2a interneurons, or in their synaptic connections onto motor neurons, may contribute to the pathogenesis of ALS. Current evidence also shows that V2a interneurons do not degenerate in ALS, and therefore represent a potentially tractable model for understanding the molecular mechanisms that protect against ALS.

To test synaptic connections between  $\alpha$ -motor neurons and V2a interneurons, optimization is required of the V2a differentiation protocol to enrich the population of V2a interneurons. Optimization will result from the titration of retinoic acid (RA) and a Sonic Hedgehog agonist (SAG) to establish a higher density of V2a interneurons to  $\alpha$ -motor neurons in embryoid bodies. The expected results will differentiate more V2a interneurons compared to  $\alpha$ -motor neurons by decreasing the SAG and RA concentrations delivered to embryoid bodies. These results will allow for the further characterization of the role of V2a interneurons in ALS.

**Ashley Rector**

**Faculty Mentor: Professor Duncan Menge**

*How does Nitrogen Fixation by Robinia Pseudoacacia Affect Climate Change?*

Climate change is driven by the increased emission of greenhouse gasses such as carbon dioxide, methane, and nitrous oxide. As a result, the number of nitrogen-fixing plants is expected to increase as well.

Symbiotic nitrogen-fixation (SNF) allows for nitrogen to enter ecosystems and support carbon storage. However, lack of downregulation of nitrogen-fixation can lead to greenhouse gas soil flux by which nitrogen-fixing plants may add excess nitrogen to soils and increase the release of carbon dioxide, methane, and nitrous oxide into the atmosphere. Based on the general distribution of nitrogen-fixing plants rhizobial plants fix nitrogen at lower latitudes and actinorhizal plants fix nitrogen at higher latitudes. The rhizobial tree, *Robinia pseudoacacia*, persists at latitudes above 35°N, in contrast to the theoretical geographic distribution of rhizobial and actinorhizal plants. The SNF strategies of trees like *Robinia pseudoacacia* are unknown. To better understand these outliers, we took gas flux samples from a range of nitrogen fertilized and unfertilized soils near *Robinia pseudoacacia* and a non-fixing tree, *Betula nigra*, in Black Rock Forest, New York. We are analyzing the samples for carbon dioxide, methane, and nitrous oxide via gas chromatography and expect to see changes in levels of greenhouse gasses depending on whether or not SNF regulation is occurring. Understanding the nitrogen fixation strategies of rhizobial plants outside of their typical latitude will provide guidance for global agricultural practices and its influence on the overall rate of climate change.

**Karen Gomez**

**Faculty Mentor: Professor Thomas Diacovo**

*Identifying Signaling Pathways Involved in Resistant T-cell Acute Lymphoblastic Leukemia*

T-cell acute lymphoblastic leukemia (T-ALL) is an aggressive and rare form of cancer in adults. The inactivation of the tumor suppressor PTEN and subsequent over-activation of the PI3K/Akt protein pathway is a major driver of this disease. Previously, PI3K isoforms  $\gamma$  and  $\delta$  were found to be specifically associated with T-ALL development and progression, and a targeted inhibitor of these proteins was developed with promising results in pre-clinical experiments. However, PI3K-targeted therapy remains unsuccessful in some cases of T-ALL, and it is unclear which additional signaling pathways are involved in promoting this resistance. The purpose of this study is to identify alternate signaling pathways that result in PI3K-resistant cancer cells. The protein expression of seven T-ALL resistant cell lines was characterized utilizing Western blot protocol to determine which proteins are up- or downregulated in tumors that evade PI3K-targeted treatment. Recognizing that protein activity is a consequence of gene expression, we hypothesize that differential

expression of proteins identified in these cell lines are indicative of oncogenic mutations which confer resistance in PTEN-null tumors. These results will expand our current understanding of T-ALL progression and propose new targets for successful treatment of resistant T-ALL.

**Kevin C. Quin**

**Faculty Mentor: Professor Josef Sorett**

*(Mis)Representing the Black Male Body: Exploring Black Masculinity and Sexuality in PrEP4Love*

In “*Reading Racial Fetishism: The Photographs of Robert Mapplethorpe*,” Kobena Mercer’s reading of Mapplethorpe’s photos of nude black men illuminates how aestheticized images of the black male body perpetuates stereotypes of black men as hypermasculine and hypersexual. Moreover, Mercer’s work calls attention to how photographic expressions of such stereotypes reveal the ways in which white people “look” and perceive black male sexuality. This project follows and complicates Mercer’s scholarship by employing a critical analysis of images of black men in PrEP4Love, an advertising campaign that promotes an HIV prevention pill called PrEP. The campaign is a collaborative effort between the Chicago PrEP Working Group and photographer Sandro Miller. Though the goal of PrEP4Love is to subvert popular safe sex advertisements by photographing at-risk models to position PrEP as a vehicle for peace of mind while exploring pleasure and intimacy, I argue that Miller’s visual articulation of black masculinity and sexuality undermines this goal as his aestheticized images perpetuate stereotypes of black men as hypermasculine and hypersexual. Using Stuart Hall’s theory of representation, my close readings of three of Miller’s images of black men in PrEP4Love unearth the ways in which Miller’s framing positions the black masculine body as a spectacle, and how the language painted onto the bodies inscribes notions of promiscuity and disease, portraying the bodies as locations for transgressive pleasure. This work ultimately seeks to provide a critical framework that fills the theoretical gap in understanding representation in relation to ideological constructions of black masculinity and sexuality.

## **Mysia Anderson**

**Faculty Mentor: Professor Shayoni Mitra**

*Blac Chyna and the Black Ratchet Imagination*

The proliferation of social media has allowed for the global consumption of images of Black women by spectators with access to a digital screen. Social media functions as a digital space with competing ideologies and aesthetics that allows participants of the space to self-curate their personalized digital representations. Blac Chyna, former stripper, video vixen, and entrepreneur, is achieving material gain and social capital through the economy that social media facilitates. Blac Chyna and other Black women cultural producers are capitalizing off of racialized and gendered ideologies that allow Black women to trade visual access to their bodies for capitalistic gain. I argue that Blac Chyna's self-curated images speak to the visual history of the Black woman's body; her aesthetics rely on the visual legacy of the colonial representation of the Venus Hottentot's excessive body. Her visibility actualizes the fantastical determination of the Black woman's body. She operates as an active opponent of Higginbotham's politics of respectability, and she is an embodiment of the politics of failure. Through her relational aesthetics and business models, Blac Chyna is successfully capitalizing off of the fetishization and consumption of the failure of Black women's aesthetics. As Blac Chyna continues to engage in the visual field, she makes room for articulations of new aesthetics grounded in LaMonda Stallings' theory of the Black Ratchet Imagination. The Black Ratchet Imagination celebrates indulgence and acceptance of the failure of Blackness.

## **José Gabriel Figueroa Carlé**

**Faculty Mentor: Professor Ana Paulina Lee**

*Spiritual Hybridity and Racial Futurity in Rita Indiana's La mucama de Omicunlé*

Rita Indiana's *La mucama de Omicunlé* (2015) provides a singular opportunity in Hispanic Caribbean literatures to discuss the intersections of race, ethnicity, gender, sexuality, and class in the contemporary Dominican Republic. Queer bodies trapped in the battles between nations in the Caribbean are left to deal with cataclysmic ecological consequences directly linked to failed postcolonial governments. A close-reading of the novel using an Afrofuturist framework reveals the author's rejection of Caribbean historical discourses by elaborating ethnicities informed by afro-Cuban spiritual practices compounded with Taino connections with nature. This alternative of "afro-Caribbeanness" for Dominican

culture provides characters a gateway for upward social mobility and racial futurity. These transgressive racial discourses challenge Trujillato's Eurocentric model of nation-building while problematizing normative gender roles that characters must either acquiesce to or reject. The author's treatment of racialized sexualities—which negotiate their performances between hegemonic codes of masculinity and homoerotic impulses—determines their success or failure in function of their embodiment of African influences in Caribbean visual arts and cultural production.

## **Elyza Sharai Dottin**

### **Faculty Mentor: Professor Celia Naylor**

*Abused, Shamed, and Silenced: Revictimizing Black Women's Sexual Assault Claims in Contemporary U.S. Society*

My research explores the influence of specific cases and claims of Black women's sexual assault on current day representations and perceptions of Black women in news and social media. I unpack how, from the 1990s to the present day, the policing of Black women in the legal battle for justice regarding their sexual assault has influenced the devaluation of Black women in U.S. society. Framing my research within the historical legacy of sexual violence of Black women during slavery and the post-emancipation era, I use theories of intersectionality and Black feminist thought to analyze both primary news source documents and scholarly works on Black women's sexual abuse. I highlight the importance of recognizing the oppressive and interconnected nature of Black women's race, class, and gender when analyzing their sexual abuse and discrimination. Using the 1995 Philadelphia case of the rape of Melody Madison, and the stories of Black women who have accused famed actor and comedian Bill Cosby of sexual assault, I analyze the revictimization and policing of Black women in both the legal process as well as in news and social media portrayals of their sexual assault. By researching these particular cases of Black women's sexual assault, I explore the cyclical nature of the legal and social effects of Black women's abasement to \ assist readers in understanding why Black women continue to be abused, shamed, and silenced in contemporary U.S. society.

## **Jasmine Wilson**

### **Faculty Mentor: Professor Farah Jasmine Griffin**

#### *Curious Black: Race-Reversal between Black and White Women Characters in Comics*

This study analyzes one of the earliest examples of characters who experience or enact a type of race-reversal characters in American comic books through a close reading of, "I Am Curious (Black)!" a comic book within Volume One of the *Superman's Girlfriend, Lois Lane* (1970) by DC Comics writer Robert Kanigher. This comic book issue is about Lois Lane, a white news reporter who decides to write a story about the black community within Metropolis called Little Africa. After recognizing community members will not speak to her as a white woman, Lois begs Superman for help, and he changes her into a black woman for one day. To analyze Lois's role as a black woman, I will employ Toni Morrison's Africanist other theory and critique the presence of black male patriarchy and white feminist thought by employing bell hooks' black feminist framework in *Ain't I a Woman: Black Women and Feminism*. I argue that race-reversal in comics is problematic given the lack of authenticity of black characters who are based on white predecessors, which then perpetuates a distorted view of black characters. I also challenge white male writers who use Africanist characters to affirm their societal beliefs of black people.

## **Jordan Baker-Tealer**

### **Faculty Mentor: Professor Brendan O'Flaherty**

#### *A Dynamic Game Modeling Cultural Appropriation*

Why is cultural appropriation harmful to the people whose culture is being appropriated? In this paper, I develop an economic model of cultural appropriation using the principles of game theory as well as an evolutionary concept of human agency in order to explain cultural appropriation and the factors that drive its persistence. In this model, individuals can take on two roles: the one who participates in the act of appropriating another's culture or the one who has their culture appropriated. Current research addresses various modeling theories and their limitations as completely applicable or reflective of reality. Literature in the field also discusses cultural appropriation in itself, as a sociological or psychological trend. I attempt to combine these two lines of research in a dynamic game that will effectively model, and therefore provide a working definition, of cultural appropriation. My work shows how cultural appropriation operates, why it is a problem, and begins to

consider what can be done about it.

## **Alijah Futterman**

### **Faculty Mentor: Professor Carla Shedd**

#### *Does Practice Meet Principle? How Training and Perceptions Influence the Implementation of Restorative Justice*

This paper seeks to identify some of the factors that influence the implementation of restorative justice principles in restorative circles at the Harlem Youth Court. Restorative justice programs have become widespread throughout the United States, as they become accepted as an effective alternative to detention for juvenile offenders who have committed minor offenses. Unlike most restorative justice programs, the Harlem Youth Court uses a model of restorative justice that integrates elements of restorative circles and youth courts. While the structure of restorative justice programs varies significantly, these programs typically employ a philosophy that emphasizes victim, offender, and community involvement in responses to crime. This study uses interviews of teens who serve as jurors at the Harlem Youth Court, observations of their training sessions, and observations of restorative circles in order to determine the ways in which restorative principles are put into practice to examine a model of restorative justice that has not previously been studied.

## **Hana Gebremariam**

### **Faculty Mentor: Professor Shamus Khan**

#### *Harvesting Community: Black Women Combating Health Inequalities through the Carrie McCracken TRUCE Community Garden*

This study examines black women's role in Harlem's Carrie McCracken TRUCE Community Garden in New York City. My research explores the intersecting identities of gender, race, and class to understand the perspectives of the black female members of the garden on health, food access, and community. Additionally, the study incorporates these identities into ethnographic accounts of black women's responses to structural and social inequality concerning health and food access. Semi-structured interviews and participant observation are used to address the following research question: How do black women respond to health inequality through community garden work? This research deviates from the common focus on the causes of inequalities and instead focuses on

how marginalized groups respond to inequalities. Black women's work in urban community gardens is an example of this powerful response.

## **Juan Contreras**

### **Faculty Mentor: Professor Niall Bolger**

#### *The Social Support Paradox: Addressing the Differences of Perceiving and Receiving Social Support*

Feelings of social support—the sense of belonging and sense of being loved—are as vital to the human condition as food and shelter. Research demonstrates that the perceived availability of social support benefits both our mental and physical health. However, research has also shown that enacted social support—the actual support given—can often fail to aid us in coping with stressful situations and can even worsen distress. Invisible support—or support that is not recognized as social support by recipients—can circumvent the costs of direct visible support. Across two studies, I demonstrate the paradox between perceived social support and enacted social support. Participants in Study 1 (N = 49) completed a self-reported measure of social support along with measures of five psychological constructs. Results from Study 1 demonstrate that perceived social support predicts beneficial outcomes such as: lower rumination, greater gratitude, greater cognitive reappraisal, a greater overlap between others and the self, and greater preventative health behaviors. In Study 2, participants (N = 152) prepared for a stressful speech on a controversial topic in front of a confederate who provided either visible or invisible social support. Results from Study 2 show that receiving visible social support produces negative outcomes, such as greater perceived indebtedness, greater social comparison, and impaired cognitive functioning. In contrast, receiving invisible social support circumvented the negative effects of direct visible support. These results demonstrate the paradox between perceiving and receiving social support.

## **José Herrera**

### **Faculty Mentor: Professor Robert Shapiro**

#### *The Perceivable Implementation of Redistribution Policies through an Analysis of Public Opinion on the Matter of Welfare and Work*

In this paper I explore Americans' attitudes towards welfare policies—more specifically, Americans' views regarding the need to engage in a form of work in order to acquire government aid. I track public

opinion polls for a period of 10+ years by targeting the most recent poll data on the subject in order to gauge how Americans' opinions have changed in the last decade. Descriptive statistics show slight changes in attitudes towards the idea of work for welfare, but overall there is a continued hostility towards programs that Americans perceive to incubate "laziness." The ramifications of this project could be used to project attitudes towards future policy initiatives such as a Basic Income Guarantee (BIG) and other forms of wealth redistribution that do not hinge on a "wage-work" relationship. In the second phase of the project, I estimate regression models to explore the relationship between various independent variables—such as religion, sex, and party identification—and public opinion on welfare. I argue that in order for such initiatives like "BIG" to gain "popular" traction in the U.S. there needs to be a continued effort to reshape core societal principals such as the "individualism" embedded in American society and the vestiges of the protestant ethic foundation.

## **David Curtiss**

### **Faculty Mentor: Professor Carla Shedd**

*"The Golden Ticket: Examining The Role of Mental Health Referrals in Treatment for Youth"*

Research suggests that over 20 percent of youth between the ages of 6-17 in the United States have a diagnosable mental or substance abuse disorder, and a majority of those young people are not receiving mental health services (MHS). In addition, there are great disparities that exist within treatment access. An often understudied component of MHS disparities amongst youth is the operation of mental health referrals, and how these referrals are employed discretionarily amongst youth due to demographic differences (e.g. location, race, and income). The major research question motivating this study is: Why is it that some youth access mental health services through schools and specialty care institutions (primarily restorative function) while others access mental health services through the juvenile justice system (punitive function)? To address this question, this paper serves as a systematic analysis of mental health service referrals across four different systems of care: education, child welfare, juvenile justice, and specialty mental health care/PCP, and then integrates these systems into a single visual diagram disaggregated by extralegal factors such as race, ethnicity, socioeconomic status, insurance status, age, and disorder type. Using a rigorous retrospective review of previous studies that investigate the use of mental health

referrals amongst different social systems of care, my work builds a visual diagram to map the various pathways of youth's introduction into the MHS system through referrals.

## **Pascual Cortes-Monroy Edwards**

### **Faculty Mentor: Professor Robert Shapiro**

*The Effects of Public Opinion on Climate Change: A Comparative Analysis of Policy Responsiveness, Energy Sources and Investment Trends at the State Level*

Climate change is seen as a major global threat. Given its environmental, economic and social consequences, my work seeks to understand whether public perception towards climate change has reduced the dependency on non-renewable sources of energy (e.g. coal, gas) for the production of electricity throughout the United States. I hypothesize that increased awareness towards climate change should lead to environmental regulation in the form of carbon taxes or divestment requirements. Consequently, I expect there to be a decrease in the percentage of total energy that is produced by non-renewable sources. Similarly, I hypothesize that if regulation has reflected public opinion, investment across the industry should decrease given the negative impact that carbon taxes have on profitability. In order to test my hypotheses, I estimate OLS models at the state level to explore the influence of public opinion on energy output by source, investment trends, and the variation of environmental policies across states. This paper contributes to the literature on democratic responsiveness by exploring the relationship between public opinion and policy. Moreover, it assesses whether the impact of opinion increases with saliency towards issues, and the extent to which interest groups and elites can counteract this effect.

## GRADUATE STUDENT MENTORS

### Science Graduate Mentors

**Claudia Becerra** is a Ph.D. student in the Integrated Program of Cellular, Molecular and Biomedical Studies. She graduated from Dartmouth College in 2013, where she majored in Biology and minored in French Literature. Claudia works in Dr. Ellen Ezzratty's lab investigating the role of the polycystin genes in epithelial stem cell biology by using the developing skin as a model. This project follows her interest in developmental cell biology and expands on her research experience in epithelial tissues.

**Geoffrey Iwata** is a Ph.D. candidate in the Department of Physics. His research focuses on the quantum mechanical properties of atoms and molecules. Geoff's lab employs state of the art techniques combining lasers and magnetic fields to trap molecules that are a million times colder than outer space. At these extreme temperatures, the molecules are effectively stationary, and it is possible to study the fundamental physics that govern our universe. With these ultra-cold molecules, Geoff and his lab mates perform some of the most precise experiments in the world, probing how molecules bond together, how quantum mechanics dictate their symmetry, how to break them apart, and much more. Geoff is currently researching a new way to cool molecules that utilizes collisions with Helium atoms; this technique should be applicable to a much wider range of molecules than is presently accessible and will enable some of the most stringent tests of quantum mechanics possible with today's technology.

### Humanities Graduate Mentors

**Anayvelyse Allen-Mossman** is a Ph.D. student in the Department of Latin American and Iberian Cultures and the Institute for Comparative Literature and Society, where she specializes in modern Latin American cultural production. Her research focuses on the relationships between urbanism, infrastructure, and visual and material culture in the 20th century. She is particularly interested in forms of infrastructures that produce and demand cartographic perspectives. She holds a B.A. in Comparative Literature from Barnard College.

**César Colón-Montijo** is a Ph.D. candidate in Ethnomusicology in the

Department of Music. César completed a B.A. in Communications at the University of Puerto Rico, Río Piedras in 2003. His research examines the life and music of the foundational Afro-Puerto Rican salsa singer Ismael “Maelo” Rivera and his dissertation relates the configuration of diverse affective alliances created through Maelo’s music among fans, musicians, and collectors in Venezuela, Panama, New York, and Puerto Rico. César also studies the formation of salsa as a genre that mediates matters of popular devotion, citizenship, drugs, confinement, and abandonment. He is the editor of *Cocinando suave: ensayos de salsa en Puerto Rico* (2015), a landmark collection of scholarly, historical, and journalistic essays, poems, and photo-essays about the histories of salsa. César has received prestigious journalism prizes such as the National Journalism Award (2008) and multiple awards from the Overseas Press Club of Puerto Rico (2007, 2006, 2002).

## **Social Science Graduate Mentors**

**Bailey Brown** is a Ph.D. student in Sociology, a Paul F. Lazarsfeld Fellow, and Ford Foundation Predoctoral Fellow at Columbia University. Her research interests include race, education, social networks, and stratification. Bailey’s most recent research has explored issues of race and educational inequality in urban neighborhoods. Her work focuses on how neighborhood contexts shape family and youth outcomes. She has used GIS analysis to examine charter school development in the Greater Philadelphia area and conducted a qualitative study of West Philadelphia’s rental housing sector to provide a context for understanding how low-income parents seek affordable rental housing. As part of her dissertation work, Bailey researches the specific disadvantages low-income Black and Latino families face in the area of housing and school choice in New York City. Bailey received her B.A. in Sociology from the University of Pennsylvania with minors in Urban Education and Africana Studies. She participated in the Ronald E. McNair Scholars program at her home institution and the Leadership Alliance research program at the University of Chicago. During her undergraduate career, she worked as a mentor and tutor for students attending elementary schools in West Philadelphia, which cultivated her interests in schooling experiences and neighborhoods.

**Brittany Fox-Williams** is a Ph.D. student in the Department of Sociology and a Paul F. Lazarsfeld Fellow. She holds an M.P.A. with a focus in Urban Social Policy from the School of International and Public Affairs (SIPA) at Columbia. While at SIPA, she served as a graduate assistant to the former New York City Mayor David Dinkins. Her research interests include children and youth, education, race and ethnicity, social inequality, and public policy. Brittany's dissertation research examines inequality in youth-authority relations in the education and justice systems. She currently serves as a graduate student co-coordinator of the Race, Ethnicity and Migration Workshop at Columbia.

**Viviana Rivera-Burgos** is a Ph.D. student in Political Science, specializing in environmental politics, public opinion, and the politics of Latin Americans and their descendants in both the U.S. and the Americas more broadly. Her current research examines the role that welfare plays in Latinos' political attitudes and behavior. Viviana earned her B.A. in Political Science from the University of Puerto Rico in 2014. She has also worked for the U.S. Fish and Wildlife Service and Columbia's Earth Institute, conducting surveys of farmers in Puerto Rico and Jamaica, respectively.

**Sandra Portocarrero** is a Ph.D. student in the Department of Sociology and a 2015 Paul and Daisy Soros Fellow. She holds a B.A. with High Honors from the University of California, Berkeley. At Berkeley, Sandra won the CAL Alumni Achievement Award, and was accepted into the Haas Research Program and the McNair Scholars Program. Funded by the Institute of International Studies and the Haas Fellowship, she wrote her thesis on the effects of participation in an organization on the lives of Andean women affected by civil war in Ayacucho, Peru. At Columbia, Sandra studies the relationship of low-income immigrant populations to the criminal justice system. Her goal is to produce academic research that can be used to develop policies that help to alleviate poverty in the United States.

Office of Academic Diversity  
Graduate School of Arts and Sciences  
Columbia University  
107 Low Memorial Library  
535 West 116th Street  
New York, NY 10027

 [gsas-diversity@columbia.edu](mailto:gsas-diversity@columbia.edu)  
 (212) 851-9851  
 [facebook.com/ColumbiaGSAS](https://facebook.com/ColumbiaGSAS)  
 @ColumbiaGSAS