

Jesús Evaristo Madrid

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Education

PhD, Neurosciences, Stanford University, Stanford, CA Expected 09/2018
Dissertation: Biological and behavioral correlates of social perception in rhesus macaques (*Macaca mulatta*)
Committee: Dr. Karen Parker (adviser), Dr. Joseph Garner, Dr. Russell Fernald, Dr. John Capitanio

BA, Neuroscience & Behavior, Columbia University, New York, NY 2008-2012

Funding

- Diversifying Academia, Recruiting Excellence Doctoral Program [\$65,000] 2016-2018
- NIH Neuroscience Research Training Grant T32 [\$132,000] 2013-2016
- Columbia University Work Exemption Program Grant [\$4,500] 2010-2012
- Columbia University Scholars Program—Kluge Scholar [\$208,000] 2008-2012

Honors, Awards, and Fellowships

- Gordon Research Conference- Carl Storm Underrepresented Minority Fellowship [\$1,000] 2017
- Society for Neuroscience- Neuroscience Scholars Program Fellowship [\$8,500] 2015-2017
- SPINES- Symposium Travel Award [\$600] 2015
- Marine Biological Laboratory- Summer Program In Neuroscience, Ethics & Success (SPINES) [\$3,000] 2015
- Stanford University- Biosciences Excellence in Diversity and Societal Citizenship Award [\$1,000] 2015
- American Society of Primatologists- Ruppenthal Travel Award [\$500] 2015
- Stanford University- Biosciences Office of Graduate Education Travel Award [\$3,400] 2014-2017
- Stanford University- El Centro Chicano y Latino Graduate Scholar in Residence [\$3,000] 2014-2015
- Society for Neuroscience- Neuroscience Scholars Program Associate 2014-2015
- Ford Foundation Predoctoral Fellowship- Honorable Mention 2015
- National Science Foundation Graduate Research Fellowship- Honorable Mention 2014
- Stanford University- ADVANCE Summer Fellowship [\$6,000] 2013
- Columbia University- Scholars Program Summer Enhancement Fellowship [\$3,000] 2011
- Stanford University- Summer Research Program- Amgen Scholar [\$3,000] 2010

Research Experience

PhD Candidate: Dr. Karen Parker, Department of Psychiatry & Behavioral Sciences, Stanford University

2013-present

- Dissertation work seeks to understand the role of oxytocin/vasopressin systems and social signal recognition in the predictive relationship between early social face perceptual abilities and later social functioning in rhesus macaques.
- Trained and coordinated undergraduate research assistants to collect detailed homecage data on social interactions and signaling of juvenile rhesus macaque monkeys at the California National Primate Research Center.
- Coded archival videos testing the social signal perceptual abilities of infant rhesus macaques.
- Executed cortisol radioimmuno assays for detection of HPA response to pharmacological manipulations as well as ELISA based detection of endogenous CSF neuropeptide levels as potential biomarkers for social behavior.

Field Laboratory Manager: Dr. Dario Maestripietri, Institute for Mind and Biology, The University of Chicago

2012-2013

- Managed data collection for a longitudinal experiment investigating the effects of maternal rejection on the development of stress vulnerability and resilience in a colony of free-ranging rhesus macaques at Cayo Santiago, PR.
- Trained and supervised three field assistants for proper subject identification, urinary/fecal sample collection and all occurrence behavioral data collection.
- Responsible for collecting a variety of field behavioral and physiological data from juvenile monkeys. During the trapping period; I 1) conducted cognitive and emotional reactivity assessments; 2) participated in the collection of cerebrospinal fluid and blood samples for subsequent neuropeptide and neuroendocrine quantification; and 3) performed pharmacological challenges of the hypothalamic-pituitary-adrenal axis of subjects to profile their endocrine response.

Teaching Experience

Instructor, Stanford Splash, Stanford University, Stanford, CA **2014-2016**

- Co-instructed two different courses for Stanford Splash, a bi-annual course and workshop enrichment weekends to over 2,000 middle and high school students.
- Led four cohort of 25 students each through experiments on cortical representation of sensation, a hands-on exploration of evolutionary differences in brain specializations, and a discussion on generation of an action potential.
- Independently designed and taught a class on introductory concepts of ethology to two cohorts of 20 students each.

Instructor, Club de Ciencias de Mexico, Ensenada, Mexico **2014**

- As part of a Harvard University-led initiative to make high-quality science research skills and tools accessible to students in Mexico, I led a week-long workshop to motivated high school and undergraduate students.
- I designed and conducted an interactive, demonstration-based class, teaching students about the brain's sensorial representations of the world via hands on electrophysiology experiments and brain dissections.
- As part of the executive team, I am currently leading efforts to establish Stanford University departmental sponsorship.

Professional Service

Nanosymposium Chair, Society for Neuroscience **Washington D.C. 2017**

- Successfully proposed and organized a nanosymposium entitled: "Hormonal and Neuropeptide Control of Physiology and Behavior".
- Symposium presented an update on our current knowledge of the conserved function of oxytocin and vasopressin signaling.
- Assembled speakers line-up included: Dr. Milo Rokic, Constantina Theofanopoulou, Dr. Alexa Veenema, Dr. Iona Carcea, Dr. Caroline Wee, Dr. Sarah Freeman, Dr. Olga Dal Monte, Jesus Madrid, Dr. Yaoguang Jiang, and Dr. XiaoLe Ma.

Symposium Organizer, American Society of Primatologists/International Primatological Society **Chicago, IL 2016**

- Successfully proposed and organized a half-day symposium entitled: "The social juvenile, the ontogeny of primate social skills and relationships".
- Symposium presented an update on our current knowledge of the importance of primate juvenility across primate taxa, as well as highlighted the need to understand this critical developmental period during which primates transition from maternal dependency to becoming independent social actors.
- Assembled speakers line-up included: Iulia Badescu, Lauren Wooddell, Aaryn Mustoe, Kristin Sabbi, Drew Enigk, Dr. Amy Schreier, Dr. Lynn Fairbanks, Dr. Kai McCormack, Dr. Tara Mandalaywala, Dr. Lisa Parr, Dr. Tamara Weinstein, Dr. Stephanie Meredith, and Dr. Stephen Suomi.

Institutional Service

Student Representative, Neuroscience Program, Stanford University, Stanford, CA **2014-present**

- Elected for administrative role of student speaker.
- Duties include directing and assembling weekly graduate student journal clubs as well as quarterly invite speakers as part of an NIH training grant professional development series exposing peers to career perspectives and presentation skills.
- Serve as a student representative in graduate student program administration.

Graduate Student Representative, Task Force on Diversity and Societal Citizenship, Stanford University School of Medicine, Stanford, CA **2015-2017**

- Appointed to task force assembled the Dean of Stanford's School of Medicine and charged with assessing current campus environment on diversity.
- Committee proposed initiatives to better recruit, retain and improve diversity on campus at graduate and faculty levels.

Admissions Officer, Stanford Summer Research Program, Stanford University, Stanford, CA **2015-2017**

- Served as admissions officer for the Amgen-funded undergraduate summer research program hosted at Stanford University.
- Responsible for the reviewing and identification of qualified students who would benefit from participation in the intensive summer research program aimed at recruitment of underrepresented minorities in STEM research.

Graduate Scholar-in-Residence, El Centro Chicano, Stanford University, Stanford, CA **2014-2015**

- Was selected as one of six interdisciplinary graduate students programmatically involved at Stanford's Latino/a cultural center.
- As a scholar-in-residence we are expected to have a year-round continued academic presence and involvement in the center and are in charge of constructing opportunities to serve as mentors and role models to Stanford undergraduates.

Outreach

Community Outreach Chair, Stanford Splash, Stanford University, Stanford, CA **2015-2016**

- Part of administrative leadership team that plans bi-annual course and workshop enrichment weekends to over 2,000 middle and high school students.
- As chair of community outreach, I ensured that the program is made accessible to students from first-gen/low-income and underrepresented backgrounds by establishing and coordinating partnerships with existing programs and schools around the San Francisco Bay Area that cater to underprivileged communities.

Mentor, Frosh Scholars, Stanford University, Stanford, CA **2014-2016**

- Participant in in mentoring initiative Stanford to provide awareness, mentorship and support to individuals self-identified as Latino.
- Mentored three Stanford undergraduate freshman majoring in product design and biology. We held monthly meetings during which provided academic advice and actively monitored his transition into Stanford University.
- Provided honor thesis support to two Stanford University undergraduate students in the psychology department.

Vice-President, BioAIMS, Stanford University, Stanford, CA **2014-2016**

- Twice elected vice-president for Stanford's Biomedical Association for the Interest of Minority Students (BioAIMS).
- Responsibilities include oversight of chairs coordinating cultural appreciation events.
- During VP tenure I co-found:
 - A series of workshops that allowed attendants to investigate the role of arts in activism in social justice movements.
 - A student-facilitated discussion series that gives biomedical graduate students a forum to talk about the various impacts of their identities on their perspectives and daily interactions.
 - "Reading the Rainbow" a journal club invested in discussing primary research on and influencing multiculturalism in academia.
- Was a key organizer for the Stanford's School of Medicine "Black Lives Matter" peaceful demonstration.
- Organized and executed the 2015 annual diversity retreat themed "Uncovering Our Roots".

Panelist, Safe and Open Spaces at Stanford (SOSAS), Stanford University, Stanford, CA **2014-2015**

- Regular panelist in student-run outreach workshops that disseminate awareness of LGBTQ concerns.
- Panelist in sessions discussing promoting safe environments for LGBTQ identified trainees in labs as well as on sessions investigating the intersection of socioeconomic class and LGBTQ identities.

Mentor, First Gen Low-Income Mentoring Initiative, Stanford University, Stanford, CA **2013-2015**

- Participant in inaugural initiative at Stanford to provide awareness, mentorship and support to individuals self-identified as first generation college students or from a low-income household.
- Mentored three Stanford undergraduate freshmen pursuing studies in symbolic systems. We held quarterly meetings where I connected my mentees, interested in pursuing graduate research in computational neuroscience, with relevant academic and network resources.

Research Supervisor, Stanford University, Stanford, CA **2012-2017**

- Trained and supervised research assistants during biological sample and behavioral data collection, data management, journal clubs, and presentation skills.
- Clement Ludcher (Undergraduate), Arianna Tapia (Undergraduate), Christina Huber (Undergraduate).

Publications

Madrid, J., Mandalaywala, T., Coyne, S., Ahloy-Dallaire, J., Garner, J., Barr, C., Maestripieri, D., Parker, K. (2018). Adaptive developmental plasticity in rhesus macaques: the serotonin transporter gene interacts with maternal care to affect juvenile social behavior. *Proceedings of the Royal Society B*. in press.

Madrid, J.E., Oztan, O., Del Rosso, L.A., Calonder, L.A., Chun, K., L., Capitanio, J.P., Garner, J.P., Parker, K.J. (2017). Preferences for novel faces in male infant monkeys predicts cerebrospinal fluid oxytocin concentrations later in life. *Scientific Reports* 7(1):12935. [[link](#)]

Sclafani, V., Del Rosso, L., Seil, S., Calonder, L., **Madrid, J.**, Bone, K., Sherr, E., Garner, J., Capitanio, J., Parker, K. (2016). Early predictors of impaired social functioning in male rhesus macaques (*Macaca mulatta*). *PLOS ONE* 11(10):e0165401. [[link](#)]

Kundakovic, M., Gudsnuk, K., Franks B., **Madrid, J.**, Miller, R., Perera, F., Champagne, F. (2013). Sex-specific epigenetic disruption and behavioral changes following low-dose in utero Bisphenol A exposure. *Proceedings of the National Academy of Sciences* 110(24):9956-61. [[link](#)]

Invited Conference Talks

- Preference for novel faces in male infant monkeys predicts cerebrospinal fluid oxytocin concentrations later in life. Society for Neuroscience, Washington D.C. 2017.
- Serotonin transporter and maternal care: a case for undirected environmental susceptibility. American Society of Primatologists, Bend, Oregon. 2015.
- Stress-coping induced myelination of the prefrontal lobe. Amgen Scholars Symposium, Los Angeles, California. 2010.

Invited Seminars

- Johann-Friedrich-Blumenbach Institute for Zoology and Anthropology, University of Göttingen, Germany. 2018
- Department of Evolutionary Anthropology, Duke University, Durham, North Carolina. 2018

Posters Presentations

Madrid, J., Oztan, O., Del Rosso, L., Calonder, L., Chun, K., Capitanio, J., Garner, J., Parker, K. (2017). Face recognition ability during infancy predicts oxytocin concentrations during juvenility of rhesus macaques. Gordon Research Conference on Neuroethology: Behavior, Evolution & Neurobiology, Les Diablerets, Switzerland.

Madrid, J., Mandalaywala, T., Coyne, S., Garner, J., Barr, C., Maestripieri, D., Parker, K. (2015). Serotonin transporter and maternal care: GxE effects on juvenile rhesus macaques. Society for Neuroscience, Chicago, Illinois.

Madrid, J., Mandalaywala, T., Coyne, S., Hyde, S., Garner, J., Maestripieri, D., Parker, K. (2015). Variation in early maternal rejection influences central oxytocin release in infant rhesus macaques (*Macaca mulatta*). Society for Behavioral Neuroendocrinology, Pacific Grove, California.

Madrid, J., Mandalaywala, T., Coyne, S., Garner, J., Barr, C., Maestripieri, D., Parker, K. (2014). Serotonin transporter and maternal care: a sex-specific GxE effect on juvenile social play in Rhesus. Animal Behavior Society, Princeton, New Jersey.

Madrid, J., Mandalaywala, T., Coyne, S., Hyde, S., Garner, J., Maestripieri, D., Parker, K. (2014). Variation in early maternal rejection produces differences in the biology of free-ranging infant rhesus macaques (*Macaca mulatta*). Society for Neuroscience, Washington D.C.

Chan, T., Kyere, K., **Madrid, J.**, Schubmehl, C., Chemiakine, A., Kabitzke, P., Wiedenmayer, C. (2010). The role of the medial prefrontal cortex in emotion regulation of infants, juveniles and adolescents. Society for Neuroscience, San Diego, California.

Chan, T., Kyere, K., Oliver, C., **Madrid, J.**, Schubmehl, C., Chemiakine, A., Shair, H., Wiedenmayer, C. (2010). The connection between the medial prefrontal cortex, amygdala and periaqueductal gray in innate fear processing during ontogeny. International Society for Developmental Psychobiology, San Diego, California.

Diaz, R., **Madrid, J.** Roychowdhury, S. (2009). Activation of alpha 2-adrenergic Receptors by Uk14.304 Inhibits Microtubule Assembly and promotes Expression of Gi-alpha at the G1 Phase of the Cell Cycle in Pc12 Cells. ABRCMS, Phoenix, Arizona.

Martinez, J., **Madrid, J.** Roychowdhury, S. (2009). Regulation of Microtubule Assembly by alpha and beta-gamma subunits of G Proteins(Gi) in Mitotic Cells. ABRCMS, Phoenix, Arizona.

Professional Memberships & Affiliations

- Society for Behavioral Neuroendocrinology
- Animal Behavior Society
- Society for Neuroscience
- American Society of Primatologists
- International Primatological Society

Technical Skills

- Rodent intraperitoneal drug administration, surgical cannulation, transcardiac perfusion
- Rhesus monkey cisternal CSF collection, femoral blood collection, saphenous vein drug administration
- Immunohistochemistry staining, immunocytochemistry staining, *in situ* hybridization
- Protein immunoblot (western blot), gel electrophoresis, immunoprecipitation
- Bacterial plasmid transformation, polymerase chain reaction (PCR)-based cloning
- Cryostat-microtome brain section preparation
- Eukaryotic and prokaryotic cell cultivation
- Cortisol radioimmunoassay
- Behavioral collection, Noldus Observer, Psion
- Oxytocin/Vasopressin solid phase extraction
- Enzyme-Linked Immunosorbent Assay
- Statistical analysis (JMP, R)

References

Karen Parker, PhD (Graduate Adviser)

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