

# Jaime J. Castellon

Duke University  
Department of Psychology & Neuroscience  
[jaime.castrellon@duke.edu](mailto:jaime.castrellon@duke.edu)  
<https://jcastrel.github.io/>  
Office: (919) 668-6144  
LSRC C03D  
Durham, NC 27708



## EDUCATION

---

- 2022 (Expected)      Duke University, Durham, NC  
PhD, Psychology & Neuroscience (Cognitive Neuroscience)  
Advisor: Gregory Samanez-Larkin
- 2013                      University of Southern California, Los Angeles, CA  
BA, *cum laude*, Neuroscience; Political Science  
Advisor: Mara Mather

## RESEARCH POSITIONS

---

- 11/2016 – 07/2017      UCLA, Los Angeles, CA  
Laboratory Manager, Cognitive & Clinical Neuroscience Lab  
Principle Investigator: Katherine Karlsgodt
- 06/2014 – 10/2016      Vanderbilt University, Nashville, TN  
Research Analyst & Study Coordinator, Affective Neuroscience Lab  
Principle Investigator: David Zald
- 01/2012 – 05/2014      University of Southern California, Los Angeles, CA  
Research Assistant, Emotion & Cognition Lab  
Principle Investigator: Mara Mather

## PUBLICATIONS

---

Seaman, K.L., Smith, C.T., Juarez, E.J., Dang, L.C., **Castrellon, J.J.**, Burgess, L.L., San Juan, M.D., Kundzicz, P.M., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R. (*In press*). Differential regional decline in dopamine receptor availability across adulthood: Linear and nonlinear effects of age. *Human Brain Mapping*. [preprint link](#)

**Castrellon, J.J.**, Seaman K.L., Crawford, J.L., Young, J.S., Smith, C.T., Dang, L.C., Hsu, M., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R. (2019). Individual differences in dopamine are associated with reward discounting in clinical groups but not in healthy adults. *Journal of Neuroscience*. [link](#).

Dang, L.C., Samanez-Larkin, G.R., **Castrellon, J.J.**, Perkins, S.F., Cowan, R.L., Zald, D.H. (2018). Individual differences in dopamine D2 receptor availability correlate with reward valuation. *Cognitive, Affective, & Behavioral Neuroscience*. [link](#)

Seaman, K.L., Brooks, N., Karrer, T., **Castrellon, J.J.**, Perkins, S.F., Dang, L.C., Hsu, M., Zald, D.H., Samanez-Larkin, G.R. (2018). Neural subjective value representations during physical effort, probability, and time discounting are stable across adulthood. *Social Cognitive Affective Neuroscience*. [link](#)

Dang, L.C., Samanez-Larkin, G.R., Smith, C.T., **Castrellon, J.J.**, Perkins, S.F., Cowan, R.L., Claassen, D.O., Zald, D.H. (2018). FTO affects food cravings and interacts with age to influence age-related decline in food cravings. *Physiology & Behavior*. [link](#)

Dang, L.C., Samanez-Larkin, G.R., **Castrellon, J.J.**, Perkins, S.F., Cowan, R.L., Newhouse, P.A., Zald, D.H. (2017). Spontaneous eye blink rate (EBR) is uncorrelated with dopamine D2 receptor availability and unmodulated by dopamine agonism in healthy adults. *eNeuro*. [link](#)

Barber, S.J., **Castrellon, J.J.**, Opitz, P., & Mather, M. (2017). Younger and older adults' collaborative recall of shared and unshared emotional pictures. *Memory & Cognition*. [link](#)

Dang, L. C., **Castrellon, J.J.**, Perkins, S. F., Le, N. T., Cowan, R. L., Zald, D. H., & Samanez-Larkin, G. R. (2017). Reduced effects of age on dopamine D2 receptor levels in physically active adults. *NeuroImage*, 148, 123-129. [link](#)

Dang, L.C., Samanez-Larkin, G.R., **Castrellon, J.J.**, Perkins, S.F., Cowan, R.L., Zald, D.H. (2016). Associations between dopamine D2 receptor availability and BMI depend on age. *NeuroImage*, 138, 176-183. [link](#)

---

## MANUSCRIPTS IN PREP

**Castrellon, J.J.**, Dang, L.C., Smith, C.T., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R. (*In prep*). Latent circuit organization of dopamine D2 receptors.

**Castrellon, J.J.**, Dang, L.C., Young, J.S., Zald, D.H., Samanez-Larkin, G.R., (*In prep*). Mesolimbic dopamine D2 receptors and neural representations of subjective value.

Juarez, E.J., **Castrellon, J.J.**, Green, M.A., Crawford, J.L., Seaman, K.L., Smith, C.T., Dang, L.C., Matuskey, D., Morris, E., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R. (*Under review*, [preprint link](#)). Reliability of the correlative triad among aging, dopamine, and cognition.

---

## PRESENTATIONS

*\* indicates undergraduate research mentee*

**Castrellon, J.J.**, Dang, L.C., Smith, C.T., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R., Latent organization of dopamine D2 receptors. Poster to be presented at the annual meeting of the Organization for Human Brain Mapping. Rome, Italy. June 2019.

**Castrellon, J.J.**, Young, J.S., Dang, L.C., Smith, C.T., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R., Individual differences in dopamine support self-control of everyday desires. Poster to be presented at the annual meeting of the Social Affective Neuroscience Society. Miami, FL. May 2019.

\*Meade, J., \*Greenwald, L., \*Hurst, K., **Castrellon, J.J.**, Samanez-Larkin, G.R., The effect of dopamine drugs on reward discounting: A systematic review and meta-analysis. Poster to be presented at the annual meeting of the Society of Biological Psychiatry. Chicago, IL. May 2019.

**Castrellon, J.J.**, Samanez-Larkin, G.R., Parsing the role of dopamine in reward discounting and subjective valuation. Spotlight poster presented at the annual meeting of the Society for Neuroeconomics. Philadelphia, PA. October 2018. \*Best Poster Award Winner

Armora, E.G., **Castrellon, J.J.**, Cooper, J.A., Smith, C.T., Zald, D.H., Samanez-Larkin, G.R., Sex differences in effort discounting in late middle-age but not younger adulthood. Poster presented at the annual meeting of the Society for Neuroeconomics. Philadelphia, PA. October 2018.

**Castrellon, J.J.**, Dang, L.C., Young, J.S., Zald, D.H., Samanez-Larkin, G.R., Individual differences in dopamine D2 receptors and neural representations of subjective reward value. Poster presented at the annual meeting of the Cognitive Neuroscience Society. Boston, MA. March 2018.

Juarez, E.J., **Castrellon, J.J.**, Green, M.A., McAllister, G.A., Seaman, K.L., Smith, C.T., Dang, L.C., Zald, D.H., Samanez-Larkin, G.R., Reliability of the correlative triad among aging, dopamine, and

cognition. Poster presented at the annual meeting of the Cognitive Neuroscience Society. Boston, MA. March 2018.

**Castrellon, J.J.**, Karlsgodt, K.H., Diffusion-imaging derived cell density in the nucleus accumbens core predicts delay discounting in humans. Poster presented at the annual meeting of the Society for Neuroscience. Washington, D.C. November 2017.

McAllister, G.A., **Castrellon, J.J.**, Seaman, K.S., Crawford, J.L., Blow, T., Smith, C.T., Dang, L.C., Hsu, M., Zald, D.H., Samanez-Larkin, G.R., Individual differences in dopamine receptor availability are not associated with preferences for time, probability, or effort across adulthood. Poster presented at the annual meeting of the Society for Neuroeconomics. Toronto, CN. October 2017.

Dang, L.C., Samanez-Larkin, G.R., **Castrellon, J.J.**, Perkins, S.F., Cowan, R.L., Newhouse, P.A., Zald, D.H., Spontaneous eye blink rate: a reliable proxy for dopamine function? Poster presented at the annual meeting of the Organization for Human Brain Mapping. Vancouver, Canada. June 2017.

Smith, C.T., **Castrellon, J.J.**, Tetreault, A.M., Katz, D.T., Wilkinson, M.R., Hinton, K.E., Ichinose, M., Zald, D.H., Inhibitory intolerance to uncertainty relates to processing of implicit risk in a modified fMRI BART. Poster presented at the annual meeting of the Organization for Human Brain Mapping. Vancouver, Canada. June 2017.

Smith, C.T., Buckholtz, J.W., Dang, L.C., Tetreault, A.M., Perkins, S.F., **Castrellon, J.J.**, Cowan, R.L., Kessler, R.M., Samanez-Larkin, G.R., Zald, D.H., Investigating the effects of common dopamine D2 receptor gene polymorphisms on D2/3 striatal midbrain dopamine receptor availability with [18F]fallypride PET: C957T (rs6277) as a key determinant. Poster presented at the annual meeting of the Society for Neuroscience. San Diego, CA. October 2016.

Dang, L.C., Samanez-Larkin, G.R., **Castrellon, J.J.**, Perkins, S.F., Cowan, R.L., Zald, D.H., Who is physically active? A dopamine story. Poster presented at the annual meeting of the Organization for Human Brain Mapping. Geneva, Switzerland. June 2016.

**Castrellon, J.J.**, Smith, C.T., Perkins, S.F., Samanez-Larkin, G.R., Zald, D.H., Monoamine oxidase A: a genetic marker of social reward preferences. Oral presentation at the annual Interdisciplinary Symposium on Decision Neuroscience. Temple University. Philadelphia, PA. June 2016.

Dang, L.C., Samanez-Larkin, G.R., **Castrellon, J.J.**, Perkins, S., Cowan, R., Zald, D.H., Associations between dopamine D2 receptor availability and BMI depend on age. Poster presented at the annual meeting of the Society of Biological Psychiatry. Atlanta, GA. May 2016.

**Castrellon, J.J.**, Dang, L.C., Perkins, S.F., Samanez-Larkin, G.R., Zald, D.H., Aging contributes to grey matter volume and attentional impulsivity correlates in frontoparietal functional connectivity. Poster presented at the annual meeting of the Society for Neuroscience. Chicago, IL. October 2015.

Weiner, D., Dang, L.C., **Castrellon, J.J.**, Perkins, S., Vekaria, K., Zald, D.H., Samanez-Larkin, G.R., Regulation of desires in everyday life partially mediates the relation between dopamine and BMI across the human life span. Poster presented at the annual meeting of the Society for Neuroeconomics. Miami, FL. September 2015.

Dang, L.C., Samanez-Larkin, G.R., **Castrellon, J.J.**, Perkins, S., Cowan, R., Zald, D.H., Individual differences in dopamine receptors and reward-related BOLD activity. Poster presented at the Scientific Research Network on Decision Neuroscience & Aging Conference. Miami, FL. March 2015.

**Castrellon, J.**, Ponzio, A., Faskowitz, J., Mather, M., The impact of caloric restriction on subcortical structures. Poster presented at the annual meeting of the Western Psychological Association. Portland, OR. April 2014.

Faskowitz, J., Ponzio, A., **Castrellon, J.**, Mather, M., The influence of emotion on the recognition of change. Poster presented at the annual meeting of the Western Psychological Association. Portland, OR. April 2014.

## AWARDS & FUNDING

---

2018	Best Poster Award, Society for Neuroeconomics
2018	Student Travel Award, Society for Neuroeconomics
2018 – 2020	Duke University Bass Connections Grant (co-Investigator w/Samanez-Larkin) Project Title: <i>Using neuroscience to optimize digital health interventions across adulthood</i> (\$50,000 + \$36,000 supplement) [ <a href="#">project details link</a> ]
2017 – 2022	National Science Foundation Graduate Research Fellowship
2013 & 2012	USC Summer Undergraduate Research Fund Grant (\$2,500)
2012	USC Student Opportunities for Academic Research Grant (\$1,000)
2011 – 2013	Rose Hills Foundation Tuition Scholarship Award for Science and Engineering
2011	USC Academic Achievement Award
2011	USC Jessie Ingram Endowed Scholarship Award
2011	Xerox Hispanic Assoc. for Professional Advancement Scholarship Award
2010 – 2013	USC Latino Alumni Association Scholarship Award
2010 – 2013	Congressional Hispanic Caucus Institute Scholarship Award

## SEMINARS & TRAINING FELLOWSHIPS

---

Summer Institute for Cognitive Neuroscience sponsored by The Kavli Foundation. University of California, Santa Barbara, Santa Barbara, CA. June 2019.

Neuroimaging Analysis Reproducibility Workshop sponsored by the Laura & John Arnold Foundation. University of North Carolina, Chapel Hill. Chapel Hill, NC. December 2017.

Summer School in Social Neuroscience & Neuroeconomics, sponsored by the Scientific Research Network on Decision Neuroscience and Aging (SRNDNA). Duke University. Durham, NC. August 2017.

SRNDNA Tools of the Trade Workshop. University of California, Los Angeles. March 2017.

Mortimer D. Sackler, M.D. Summer Institute Fellowship, presented by the Sackler Institute of Developmental Psychobiology at Weill Cornell Medical College. New York, NY. July 2016.

Judicial Seminar on Emerging Issues in Neuroscience sponsored by the American Association for the Advancement of Science. Vanderbilt University, Nashville, TN. May 2016.

## AD-HOC REVIEWING

---

Neurobiology of Aging      Neuropsychologia

## MENTORING

---

\* denotes recipient of competitive undergraduate research fellowship

\*\* denotes recipient of competitive thesis fellowship award

Melanie Camejo\*\*, BS in Neuroscience & BA in Gender, Sexuality and Feminist Studies, Duke 2020

Lucy Greenwald\*, BS in Biology, Duke 2020

Katlyn Hurst\*, BS in Biology, Duke 2021

James Meade\*, BS in Chemistry, Duke 2020

Carlton Johnson\*, BS in Neuroscience, Duke 2020

Alexander Bendeck\*, Dual BA in Computer Science and Statistical Science, Duke 2021

## **TEACHING**

---

Introduction to Statistical Methods in Psychological Science (PSY 201L), SP 2019, Teaching Assistant

## **PROFESSIONAL AFFILIATIONS**

---

Society for Neuroscience  
Cognitive Neuroscience Society  
Society for Neuroeconomics

Association for Psychological Science  
Social Affective Neuroscience Society  
Organization for Human Brain Mapping