

# Jaime J. Castellon

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## EDUCATION

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|-----------------|--|
| 2022 (Expected) | Duke University, Durham, NC<br>PhD, Psychology & Neuroscience (Cognitive Neuroscience)<br>Advisor: Gregory Samanez-Larkin            |
| 2019            | Duke University, Durham, NC<br>MA, Psychology & Neuroscience (Cognitive Neuroscience)  |
| 2013            | University of Southern California, Los Angeles, CA<br>BA, <i>cum laude</i> , Neuroscience; Political Science<br>Advisor: Mara Mather |

## RESEARCH POSITIONS

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

## PUBLICATIONS

[Scholar Metrics](#)

*\* indicates undergraduate research mentee*

14. **Castrellon, J.J.**, \*Meade, J., \*Greenwald, L., \*Hurst, K., Samanez-Larkin, G.R. (2020). Dopaminergic modulation of reward discounting in healthy rats: a systematic review and meta-analysis. *Psychopharmacology*. [link](#)
13. Botvinik-Nezer, R., Holzmeister, F., Camerer, C.F., Dreber, A., Huber, J., Johannesson, M., Kirchler, M., Iwanir, R., Mumford, J.A., ...**Castrellon, J.J.**,...Samanez-Larkin, G.R., ..., Nichols, T., Poldrack R., Schonberg, T. (2020). Variability in the analysis of a single neuroimaging dataset by many teams. *Nature*. [link](#)

12. Burr, D.A., **Castrellon, J.J.**, Zald, D.H., Samanez-Larkin, G.R. (2020). Emotion dynamics across adulthood in everyday life: older adults are more stable in their affective experiences and better at regulating desires. *Emotion*. [link](#)
11. 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. (2019). Reproducibility of the correlative triad among aging, dopamine, and cognition. *Psychology and Aging*, 34(7), 921–932. [link](#)
10. **Castrellon, J.J.**, Young, J.S., Dang, L.C., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R., (2019). Mesolimbic dopamine D2 receptors and neural representations of subjective value. *Scientific Reports*, 9, 20229. [link](#)
9. 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. (2019). Differential regional decline in dopamine receptor availability across adulthood: Linear and nonlinear effects of age. *Human Brain Mapping*, 40(10), 3125-3138. [link](#)
8. **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*, 39 (2), 321–332. [link](#).
7. 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*, 18(4), 739–747. [link](#)
6. 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*, 13(5), 449–459. [link](#)
5. 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*, 192, 188–193. [link](#)
4. 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*, 4(5), ENEURO.0211-17.2017. [link](#)
3. 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*, 45(5), 716-730. [link](#)
2. 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](#)
1. 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

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**Castrellon, J.J.**, Hakimi, S., Parelman, J.M., Lin, Y., Law, J.R., Skene, J.A.G., Ball, D.A., Malekpour, A., Beskind, D., Vidmar, N., Pearson, J.M., Skene, J.H.P., Carter, R.M. (*Under review*). Distinct brain mechanisms linked to evidence accumulation and crime-type bias in juror decisions. [preprint link](#)

**Castrellon, J.J.**, Young, J.S., Dang, L.C., Smith, C.T., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R. (*In prep*). Dopamine supports self-control of everyday desires.

## PRESENTATIONS

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*\* indicates undergraduate research mentee*

**Castrellon, J.J.**, Hsu, M., Zald, D.H., Samanez-Larkin, G.R. Dopamine and preferences for equal payoffs. Spotlight poster presented at the annual meeting of the Society for Neuroeconomics. Virtual. October 2020.

\*Ilisley, A., **Castrellon, J.J.**, Zald, D.H., Samanez-Larkin, G.R. Ventral striatum dopamine transporter availability is related to fMRI activation during reward receipt but not anticipation. Poster presented at the annual meeting of the Society for Neuroeconomics. Virtual. October 2020.

**Castrellon, J.J.**, Skene, J.H.P., Yin, L., Hakimi, S., Parelman, J.M., Law, J.R., Skene, J.A.G., Ball, D., Malekpour, A., Pearson, J.M., Carter, R.M. Language and recall regions of the brain track evidence of guilt in mock criminal scenarios. Poster presented at the annual meeting of the Society for Neuroeconomics. Dublin, Ireland. October 2019.

**Castrellon, J.J.**, Zald, D.H., Samanez-Larkin, G.R., Individual differences in dopamine predict self-control of everyday desires. Spotlight poster presented at the annual meeting of the Society for Neuroeconomics. Dublin, Ireland. October 2019. **\*\*Best Poster Award Winner**

\*Johnson, Carlton P., **Castrellon, J.J.**, Crawford, J.L., Samanez-Larkin, G.R., I like it like that: reward discounting and appetitive responses to amphetamine in a drug-naïve sample of healthy adults. Poster presented at the annual meeting of the Society for Neuroeconomics. Dublin, Ireland. October 2019.

**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 presented at the annual meeting of the Organization for Human Brain Mapping. Rome, Italy. June 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 presented at the annual meeting of the Society of Biological Psychiatry. Chicago, IL. May 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 presented at the annual meeting of the Social Affective Neuroscience Society. Miami, FL. 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

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2020	Bass Connections Award for Outstanding Mentorship, Duke University
2019	Best Poster Award, Society for Neuroeconomics
2019	Charles Lafitte Foundation Graduate Travel Award, Duke University (x2)
2019	Vertical Integration Program Mentor, Duke University
2018	Best Poster Award, Society for Neuroeconomics
2018	Student Travel Award, Society for Neuroeconomics
2018	Duke Summer Research Fellowship Award
2017	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 Association for Professional Advancement Scholarship Award
2010 – 2013	USC Latino Alumni Association Scholarship Award
2010 – 2013	Congressional Hispanic Caucus Institute Scholarship Award

## GRANTS & FUNDING

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2020 – 2021	Charles Lafitte Foundation & Powell-Williams Grant (co-Investigator w/Samanez-Larkin & Sarah Gaither). Project Title: <i>Computational methods to characterize the makeup of university faculty across the United States</i> (\$4,920)
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

## **SEMINARS & TRAINING FELLOWSHIPS**

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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**

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Neurobiology of Aging      Neuropsychologia      Cerebral Cortex

Journal of Neuroscience      Journal of Gerontology: Psychological Sciences

## **MENTORING**

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*\* recipient of undergraduate research grant or fellowship*

Rebeca Alvarado Ortega\*, BA in Psychology, Arizona State University 2021

Kelsi King, BS in Neuroscience, Duke 2021

Annie Ilsley\*, BS in Neuroscience, Duke 2022

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

Carlton Johnson\*, BS in Neuroscience, Duke 2020

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

Katlyn Hurst\*, BS in Biology, Duke 2021

Lucy Greenwald\*, BS in Biology, Duke 2020

James Meade\*, BS in Chemistry, Duke 2020

## **TEACHING**

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Guest Lecture, "Developmental Cognitive Neuroscience," Developmental Psychology, FA 2020

Teaching Assistant, Developmental Psychology (PSY 103D), FA 2020

Guest Lecture, "Positron Emission Tomography," Contemporary Neuroscience Methods, SP 2020

Teaching Assistant, Contemporary Neuroscience Methods (PSY 313/NEUROSCI 376), SP 2020, [Evals](#)

Guest Lecture, "Affective Neuroscience," Introduction to Cognitive Neuroscience, FA 2019

Teaching Assistant, Intro to Cognitive Neuroscience (PSY 257/NEUROSCI 212), FA 2019, [Evals](#)

Teaching Assistant, Intro to Statistical Methods in Psychological Science (PSY 201L), SP 2019, [Evals](#)

## **PRESS**

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Department of Psychology & Neuroscience, Duke University. (2019). [Coverage of research presentation](#).

Way, K. (2019). ['Dopamine Fasting' Is the Newest 'Sounds Fake, but OK' Wellness Trend](#). *Vice Media*.

## **PROFESSIONAL AFFILIATIONS**

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Society for Neuroscience  
Cognitive Neuroscience Society  
Society for Neuroeconomics

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