

Current Research Collaborations

Using neuroscience to optimize digital health interventions

Gary Bennett (Duke Psychology & Global Health) and Emily Falk (UPenn Communications)

Memory and decision making over the adult life span

Roberto Cabeza (Duke Psychology & Neuroscience), Elizabeth Marsh (Duke Psychology & Neuroscience), Felipe de Brigard (Duke Philosophy)

Learning and financial decision making

Camelia Kuhnen (UNC Finance), George Korniotis (UMiami Finance), Nathaniel Daw (Princeton Neuroscience)

Functional, structural, and neurochemical network organization in the aging brain

Simon Davis (Duke Neurology) and Franco Pestilli (Indiana Psychology), Douglas Garrett (Max Planck Institute for Human Development, Berlin)

Aging, dopamine, and decision making

David Zald (Vanderbilt Psychology)

Mentoring Activities

Note: In my 3 years in residence at Yale, I did not admit a primary PhD student as I was uncertain about how long I would stay there. At Yale I ran an undergraduate-heavy lab with one or two post-bacc research assistants and one or two post-docs at a time. Many undergraduates in our lab have become co-authors on papers (noted on CV) and presented posters at conferences (see below). At Duke, I've admitted 5 PhD students who are all currently active in the lab and highly productive. A list of conference presentations by lab members is appended at the end of this document. **I have served as primary mentor for 3 post-doctoral fellows. Two of them are starting tenure track faculty positions in 2019.**

Post-Doctoral Fellows

Primary advisor

Candace Brown, Duke 2018–2019 (Assistant Professor of Public Health Sciences, UNC Charlotte)

Kendra Seaman, Yale 2015–2017, Duke 2017–2019 (Assistant Professor of Behavioral and Brain Sciences, University of Texas at Dallas)

Marissa Gorlick, Yale 2014–2015 (Data Scientist, Bazaarvoice)

External

Matthew Nassar (K99/R00 co-mentor), Brown 2017–2018 (Assistant Professor of Neuroscience, Brown)

Chris T Smith (co-mentored w David Zald), Vanderbilt 2016–2018 (Postdoc Program Manager, NCSU)

Linh Dang (co-mentored w David Zald), Vanderbilt 2013–2017 (Data Scientist, Google)

Graduate Students

Primary advisor

Daisy Burr (co-mentored with Ahmad Hariri), Duke 2019–

Mikella Green, Duke 2018–

Morgan Taylor (co-mentored with Elizabeth Marsh), Duke 2018–

Jaime Castrellon, Duke 2017–

Eric Juarez (co-mentored with Roberto Cabeza), Duke 2017–

Teresa Karrer (clinical psychology), Masters Thesis Co-Advisor, Technische Universität Dresden 2016

**Completed Masters as a visiting grad student in my lab at Yale*

Committee member

Kelsey McDonald (cognitive neuroscience), Major Area Paper Committee, Duke 2019

Christina Bejjani (cognitive psychology), Major Area Paper Committee, Duke 2018

Maxwell Elliott (clinical neuroscience), Major Area Paper Committee, Duke 2018

Nadia Brashier (cognitive psychology), Dissertation Committee, Duke 2017

Zachary Monge (cognitive neuroscience), Major Area Paper & Dissertation Committee, Duke 2017-2020

Aaron Reuben (clinical psychology), Major Area Paper Committee, Duke 2017

Jennifer Hirsch (social psychology), Prospectus Committee & Dissertation Committee, Yale 2016/2017

Sara Burke (social psychology), Dissertation Committee, Yale 2016

Sunny Dutra (clinical neuroscience), Dissertation Committee, Yale 2016

Rebecca van den Honert (cognitive neuroscience), Dissertation Committee, Yale 2016

Gina Roussos (social psychology), Prospectus Committee, Yale 2016

Kevin Anderson (neuroscience), 2nd Year Project Committee, Yale 2015/2016

Monica Rosenberg (cognitive neuroscience), Pre-Dissertation Committee, Yale 2014

Aleena Hay (clinical psychology), Theme Essay Committee, Yale 2014

External

William Bazley (finance), Dissertation Committee, Miami Business School, University of Miami 2016–2019

Lab Managers / Project Coordinators / Research Technicians

Sade Abiodun, Duke 2018–

Eliana Armora, Duke 2018–2019 (health science PhD at UNC-Chapel Hill)

Mikella Green, Duke 2017–2018 (psychology PhD at Duke)

Galen McAllister, Duke 2017–2018 (applied psychology MA at USC)

Jennifer Crawford, Yale 2015–2017 (psychology PhD at WashU)

Tahj Blow, Yale 2016–2017 (MD at Cornell)

Todd Hagen, Yale 2013–2015 (RA at University of Arizona)

Kruti Vekaria, Vanderbilt University 2013–2014 (PhD in psychology at Georgetown)

Jacob Young, Vanderbilt 2012–2013 (MD 2017 at U Chicago, neurosurgery resident UCSF)

Daniel Yoo, Stanford 2009–2010 (clinical psychology PhD at Emory)

Nick Hollon, Stanford 2008 (neurobiology PhD at U Washington)

Undergraduate Students*Primary Advisor*

Olalla Duato, BS in Biology (minor in Neuroscience), 2022

Alexander Bendeck, dual BA in Computer Science and Statistical Science, 2021

Christian Benitez, BS in Neuroscience (minor in Psychology, certificate in Ethics and Society), 2021

Carmela Guaglianone, BS in Neuroscience & BA in Global Health, 2021

Katlyn Hurst, BS in Biology (minor in Education, certificate in Civic Engagement and Social Change), 2021

Uma Rao, BS in Neuroscience (minor in Economics), 2021

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

Lucy Greenwald, BS in Biology (Anatomy, Physiology & Biomechanics), 2020

Carlton Johnson, BS in Neuroscience (minors in Chemistry and Psychology), 2020

Aiyanna Kimble, BA in Psychology (Civic Engagement & Social Change; Markets & Management), 2020

James Meade, BS in Chemistry (Decision Science certificate), 2020

Micaela Brewington, BS in Neuroscience with Distinction & BA in Global Health, 2019

Natalia Espinosa, BS in Neuroscience, 2019

Eliana Armora, BS in Neuroscience & BA in Global Health, 2018 (RA at Duke, health science PhD at UNC)

Zachary Spiera, BS in Neuroscience with Distinction, 2018 (MD at Mount Sinai)

Nickolas Brooks, BS in Psychology, Yale 2017 (RA at Yale University)

Lindsey Hogg, BA in Psychology, Yale 2017 (Outreach Coordinator at Urban Improvement Corps, SF)

Galen McAllister, BA in Psychology, Yale 2017 (MA at University of Southern California)

Audrey Odonkor, BA in Psychology, Yale 2017 (Asst to Chair of the Electoral Commission, UK)

Anny Dow, BS in Cognitive Science, Yale 2016 (Microsoft)

Catherine Holland, BS in Psychology, Yale 2016 (RA at Harvard, psychology PhD at Dartmouth)

Vanessa Holman, BS in Psychology, Yale 2016 (Digital Marketing, Tempo Strategic)

Kay Teo, BS in Psychology, Yale 2016 (Management Consultant, McKinsey & Company)

**Schwarzman Scholar*

Jeff Zhang, BS in Psychology and BA in Economics, Yale 2016 (Management Consultant, BCG)

Monica Chen, BA in Cognitive Science, Yale 2015 (RA at Weill Cornell Medical College)

Shirley Guo, BS in Psychology, Yale 2015 (Oliver Wyman, SF)

Erin Kelly, BS in Psychology, Yale 2015 (Kingsley Associates, SF)

Hannah Leo, BS in Psychology, Yale 2015 (MD at UCLA)

Casey McLaughlin, Dual BS in Chemistry and Psychology, Yale 2015 (RA at Columbia Medical Center)

Stacey Matakaetis, BS in Psychology, Yale 2015 (MPH at University of New Haven)

Christina Ramsay, BS in Psychology, Yale 2015 (MPH at Yale)

Brad Ward, BS in Psychology, Yale 2015 (Operations Associate, Voleon Capital Management, Berkeley)

Daniel Weiner, BA in Cognitive Science, Yale 2015 (MD/PhD in Bioinformatics & Genomics at Harvard

Medical School) **Angier Prize winner, best senior project on a psychological topic, Yale*

Mendy Yang, BA in Econ, BS in Psychology, Yale 2015 (Financial Analyst, AIG Strategic Planning, NYC)

Marina Addams, BS in Psychology, Yale 2014 (Acquisition Marketing Manager, Starry)

Andy Berry, BS in Psychology, Yale 2014 (MM in opera at Yale School of Music)
Hobart Lim, Dual BA in Cognitive Sci & Economics, Yale 2014 (Mgmt Consultant, Bane & Co Malaysia)
Alex Moffit, BS in Psychology, Yale 2014 (BetterWorks, Palo Alto)
Julie Qiu, BA in Cognitive Science, Yale 2014 (Software Engineer, Google)
Erica Reetz, BS in Psychology, Yale 2014 (Management Associate, McMaster-Carr, Chicago)
Nicole Wenger, BA in Cognitive Science, Yale 2014 (MD/MBA at Ohio State))
Lydia Qualls, BA in Psychology, Vanderbilt, 2013 (RA at Vanderbilt Kennedy Center)
Te Thamrongattanarit, BS in Symbolic Systems, Stanford, 2009 (computer science PhD at Brandeis,
faculty at Chulalongkorn University, Thailand)
Kabir Khanna, BA in Human Biology, Stanford, 2007 (political science PhD at Princeton)

Co-Advised

Ryan Kline (co-advised w Chiang-shan Li, BS in Psychology, Yale 2015 (Mark Cuban Companies)
Tyler Reynolds (co-advised w Robert Schiller), BA in Cognitive Science, Yale 2014 (pursuing tech startup)

Thesis Committee Member

Chandler Richards, BS in Neuroscience with Distinction, 2019
Shivani Chandrashekar, BS in Neuroscience with Distinction, 2018 (MD at Duke)
Jack Dolgin, BS in Neuroscience with Distinction, 2018 (RA at Duke University)
Dan McGough, BS in Neuroscience with Distinction, 2018 (MS in Biomedical Science at Duke)



Duke lab members at the 2018 Neuroeconomics conference

Mentee conference presentations

Post-Doctoral Fellows



Kendra Seaman

Seaman, K.L., Abiodun, S., Fenn, Z., Puttinger, C., Mata, R., Samanez-Larkin, G.R. (2018) Time preferences and neural representation of subjective value across adulthood. Talk presented at the annual meeting of the Society for Neuroscience, San Diego, CA.

Seaman, K.L., Smith, C.T., Zald, D.H., Daw, N.D., Samanez-Larkin, G.R. (2018) Adult age differences in d-AMPH effects on model-based learning. Poster presented at the annual meeting of the Society for Neuroeconomics, Philadelphia, PA.

Seaman, K.S., Samanez-Larkin, G.R. (2018). Individual Differences in Preferences for Skewed Risks Across Adulthood. Poster presented at the biennial meeting of the Cognitive Aging Conference, Atlanta, GA.

Seaman, K.L., Leong, J.K., Wu, C.C., Knutson, B., Samanez-Larkin, G.R. (2017) Individual differences in skewed financial risk taking across the adult life span. Paper presented at the Association for Consumer Research, San Diego, CA.

Seaman, K.L., Brooks, N., Karrer, T.M., Dang, L.C., Hsu, M., Zald, D.H., Samanez-Larkin, D.H. (2017) Neural subjective value representations across age and discount factors: time delay, physical effort, and probability discounting. Poster presented at the annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Seaman, K.L., Leong, J.K., Wu, C.C., Knutson, B., Samanez-Larkin, G.R. (2016) Adult age differences in the influence of financial skewness on choice and neural activity. Data blitz and poster presented at the annual meeting of the Cognitive Neuroscience Society, New York, NY.

**Post-Doctoral Fellows Award winning poster*

Seaman, K.L., Leong, J.K., Knutson, B., Samanez-Larkin, G.R. (2016) Adult age differences in skewed financial risk taking. Poster presented at the Dallas Aging and Cognition Conference, Dallas, TX.

Seaman, K.L., Karrer, T.M., Brooks, N., Dang, L.C., Hsu, M., Zald, D.H., Samanez-Larkin, G.R. (2016) Adult age differences in neural representations of value in time, probability and effort discounting tasks. Poster presented at the annual meeting of the Society for Neuroeconomics, Berlin, Germany.

Seaman, K.L., Gorlick, M.A., Holland, C.A.C, Hsu, M., Zald, D.H., Samanez-Larkin, G.R. (2016) Age differences in discounting of time, probability, and effort across monetary, social, and health domains. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

Seaman, K.L, Wu, C.C., Katovich, K., Knutson, K., Samanez-Larkin, G.R. (2015) Adult age differences in the influence of financial skewness on choice and neural activity. Paper presented at the annual meeting of the Society for Neuroeconomics, Miami, FL.



Marissa Gorlick

Gorlick, M.A., Hagen, T.A., Brooks, N., Dang, L.C., Hsu, M., Zald, D.H., Samanez-Larkin, G.R. (2015) Neural subjective value representations depend on costs: delay, physical

effort, and probability discounting. Poster presented at the Scientific Research Network on Decision Neuroscience and Aging conference, Miami, FL.

Graduate Students



Jaime Castrellon

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

Castrellon, J.J. & Samanez-Larkin, G.R. (2018) Parsing the role of dopamine in reward discounting and subjective value. Poster presented at the annual meeting of the Society for Neuroeconomics, Philadelphia, PA. **Selected for poster spotlight & Best Poster Award winner*

Castrellon, J.J., Dang, L.C., Young, J.S., Zald, D.H., Samanez-Larkin, G.R. (2018) 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.



Mikella Green

Green, M.A., Kuhnen, C.M., Samanez-Larkin, G.R. (2018) Generalized associations between dopamine receptor availability and risky investment decision making. Poster presented at the annual meeting of the Society for Neuroeconomics, Philadelphia, PA.

Green, M.A., Seaman, K.L., Samanez-Larkin, G.R. (2017) Individual Differences in Loss Aversion and Preferences for Skewed Risks. Poster presented at the annual meeting of the Society for Neuroeconomics, Toronto, Canada.



Eric Juarez

Juarez, E.J., Dow, A., Armora, E.G., Abiodun, S., Gruber, J., Samanez-Larkin, G.R. (2018) The emotional marketplace: If money could buy love and happiness, how much would people pay for it? Poster presented at the annual meeting of the Society for Neuroeconomics, Philadelphia, PA.

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. (2018) Reliability of the correlative triad among aging, dopamine, and cognition. Poster presented at the annual meeting of the Cognitive Neuroscience Society, Boston, MA.

Juarez, E.J., Castrellon, J.J., Green, M.A., McAllister, G.A., Crawford, J.L., Seaman, K.L., Smith, C.T., Dang, L.C., Zald, D.H., Samanez-Larkin, G.R. (2018). Reliability of the Correlative Triad among Aging, Dopamine, and Cognition. Poster presented at the biennial meeting of the Cognitive Aging Conference, Atlanta, GA.

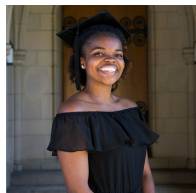


Teresa Karrer

Karrer, T.M., Josef, A.K., Morris, E., Mata, R., Samanez-Larkin, G.R. (2016) Meta-Analysis of PET and SPECT Imaging Studies of Adult Age Differences in the

Dopamine System. Poster presented at the annual meeting of the Cognitive Neuroscience Society, New York City, NY.

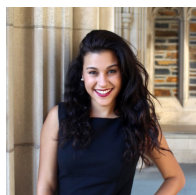
Post-Bacc Research Assistants



Sade Abiodun

Abiodun, S., Seaman, K.L., Samanez-Larkin, G.R. (2019) Subjective responses to dynamic socioemotional incentives across adulthood. Poster presented at the annual meeting of the Society for Social and Affective Neuroscience, Miami, FL.

Abiodun, S., Seaman, K.L., Mata, R., Puttinger, C., Samanez-Larkin, G.R. (2018) Time preferences across adulthood. Poster presented at the annual meeting of the Society for Neuroeconomics, Philadelphia, PA.



Eliana Armora

Armora, E.G., Abiodun, S., Seaman, K.L., Samanez-Larkin, G.R. (2019) Adult age differences in subjective responses to dynamic socioemotional incentives. Poster presented at the annual meeting of the Society for Social and Affective Neuroscience, Miami, FL.

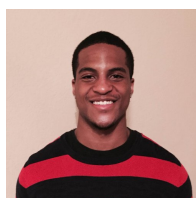
Armora, E.G., Castellon, J.J., Cooper, J.A., Smith, C.T., Zald, D.H., Samanez-Larkin, G.R. (2018) Sex differences in effort discounting in late middle-age and younger adulthood. Poster presented at the annual meeting of the Society for Neuroeconomics, Philadelphia, PA.



Jennifer Crawford

Crawford, J.L., Seaman, K.L., Vijay, A., Matuskey, D., Morris, E.D., Samanez-Larkin, G.R. (2016) Effects of age on extrastriatal dopamine D2 receptor availability are overestimated without partial volume correction. Poster presented at the annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Crawford, J.L., Seaman, K.L., Vijay, A., Matuskey, D., Morris, E.D., Samanez-Larkin, G.R. (2016) Effects of age on extrastriatal dopamine D2 receptor availability are overestimated without partial volume correction. Poster presented at the Dallas Aging and Cognition Conference, Dallas, TX.



Galen McAllister

McAllister, G.A., Castellon, J.J., Seaman, K.L., Crawford, J.L., Blow, T., Smith, C.T., Dang, L.C., Hsu, M., Zald, D.H., Samanez-Larkin, G.R. (2017) 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, Canada.



Todd Hagen

Hagen, T.A., McLaughlin, C., Josef, A., Mata, R., Samanez-Larkin, G.R. (2015) Meta-analysis of PET imaging studies of adult age differences in the dopamine system. Poster presented at the Scientific Research Network on Decision Neuroscience and Aging

conference, Miami, FL.

Hagen, T.A., Weiner, D.J., Young, J.S., Zald, D.H., Samanez-Larkin, G.R. (2014) Human striatal dopamine D2 receptor availability associated with probabilistic reward learning. Poster presented at the annual meeting of the Society for Neuroeconomics, Miami, FL.



Jacob Young

Young, J.S., Samanez-Larkin, G.R., McClure, S.M., Zald, D.H. (2014) Temporal Discounting Associated with Self-Control in Everyday Life. Poster presented at the annual meeting of the Association for Psychological Science, San Francisco, CA.

Undergraduate Students



Nickolas Brooks

Brooks, N., Seaman, K.L., Gorlick, M.A., Holman, V., Dang, L.C., Hsu, M., Zald, D.H., Samanez-Larkin, G.R. (2015) Neural subjective value representations depend on decision features: delay, physical effort, and probability discounting. Poster presented at the annual meeting of the Society for Neuroeconomics, Miami, FL.

**Selected for poster spotlight*



Catherine Holland

Holland, C.A.C., Hamilton, M., Samanez-Larkin, G.R. (2017) Heuristic models outperform traditional discounting utility models across multiple discounting and reward domains. Poster presented at the annual meeting of the Society for Neuroeconomics, Toronto, Canada.

Holland, C.A.C., Gorlick, M.A., Hsu, M., Zald, D.H., Samanez-Larkin, G.R. (2015) Age differences in discounting of time, probability, and effort across monetary, social, and health domains. Poster presented at the annual meeting of the Society for Neuroeconomics, Miami, FL.

Holland, C.A.C., Gorlick, M.A., Hsu, M., Zald, D.H., Samanez-Larkin, G.R. (2015) Age differences in discounting of time, probability, and effort across monetary, social, and health domains. Poster presented at the Scientific Research Network on Decision Neuroscience and Aging conference, Miami, FL.

Holland, C.A.C., Vekaria, K.M., Hsu, M., Zald, D.H., Samanez-Larkin, G.R. (2014) Individual differences in discounting of time, probability, and effort across monetary, social, and health domains. Poster presented at the annual meeting of the Society for Neuroeconomics, Miami, FL.



Katlyn Hurst / Lucy Greenwald / James Meade

Meade, J.A., Greenwald, L.A., Hurst, K., Castellon, J.J., Samanez-Larkin, G.R. (2019) 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.



Carlton Johnson

Johnson, C.P., Castellon, J.J., Crawford, J.L., Samanez-Larkin, G.R. (2019) I like it like that: reward discounting and appetitive responses to amphetamine in a drug naïve sample of healthy adults. **Talk** selected to be presented at the annual meeting of the International Symposium on Decision Neuroscience, Durham, NC.

**First undergraduate ever to be selected for a talk at this conference. Unfortunately had to cancel due to illness and talk was given by a post-doc instead. Will submit abstract to another conference for 2020.*



Daniel Wiener

Weiner, D.J., Dang, L., Castellon, J.J., Perkins, S., Vekaria, K.M., Zald, D.H., Samanez-Larkin, G.R. (2015) 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.