# **Gregory Russell Samanez-Larkin**

Department of Psychology & Neuroscience Center for Cognitive Neuroscience **Duke University** Campus Box 90999, Durham, NC 27708 Office 919.681.5575 Mobile 650.799.5715

g.samanezlarkin@duke.edu http://mcablab.science



### **Academic Positions**

**Publications** 

Assistant Prof	essor, Department of Psychology & Neuroscience	Duke University	2017 –
Core Faculty,	Center for Cognitive Neuroscience	Duke University	2017 –
Senior Fellow,	Center for the Study of Aging & Human Development	Duke University	2017 –
Visiting Assista	ant Professor, Finance Department, Miami Business School	University of Miami	2016 – 2017
	Wilditii Eddireda Geriooi		
Assistant Prof	essor, Department of Psychology	Yale University	2013 – 2017
Faculty, Interd	epartmental Neuroscience Program	Yale University	2013 – 2017
Faculty, Cogni	tive Science Program	Yale University	2013 – 2017
Education			
Post-Doc	Neuroscience / Psychology	Vanderbilt University	2010 – 2013
	Mentor: David Zald	•	
Ph.D.	Psychology	Stanford University	2005 – 2010
	Dissertation: Incentive processing in the aging brain	•	
	Committee: Brian Knutson, Laura Carstensen,		
	Anthony Wagner, Samuel McClure, Alan M. Garber		
M.A.	Psychology (Affective Science)	Stanford University	2005 – 2008
B.A.	Psychology (Honors)	University of Michigan	1999 – 2002
	Thesis: Physiological correlates of emotional mainten	nance	

University of Michigan - Flint 1998 – 1999

\*\*\*undergrad/postbacc, \*\*grad, \*postdoc trainee authors

Advisors: Barbara Fredrickson & Patricia Reuter-Lorenz

Google Scholar Metrics

60. \*Seaman KL, \*Smith CT, \*\*Juarez EJ, \*Dang LC, \*\*Castrellon JC, Burgess L, San Juan MD, Kundzicz PM,

Cowan RL, Zald DH, Samanez-Larkin GR (2019, in press) Differential regional decline in dopamine receptor availability across adulthood: Linear and nonlinear effects of age. Human Brain Mapping. preprint

- 59. Gutchess A., **Samanez-Larkin GR** (2019) Social function and motivation in the aging brain. In G Samanez-Larkin (Ed.) The aging brain: functional adaptation across adulthood. Washington DC: American Psychological Association. <u>preprint</u>
- 58. \*\*Castrellon JJ, \*Seaman KL, \*\*\*Crawford JL, \*\*\*Young JS, \*Smith CT, \*Dang LC, Hsu M, Cowan RL, Zald DH, **Samanez-Larkin GR** (2019) Individual differences in dopamine are associated with reward discounting in clinical groups but not in healthy adults. *Journal of Neuroscience*, 39 (2), 21-332. <a href="mailto:link.data/code/materials.neurovault.cover">link.data/code/materials.neurovault.cover</a>
- \*Smith CT, \*\*\*Crawford JL, \*Dang LC, \*Seaman KL, San Juan MD, Vijay A, Katz DT, Matuskey D, Cowan RL, Morris ED, Zald DH, Samanez-Larkin GR (2019) Partial-volume correction increases estimated dopamine D2-like receptor binding potential and reduces adult age differences. *Journal of Cerebral Blood Flow and Metabolism*. pdf data/code/materials



- \*Smith CT, \*Dang LC, Burgess LL, Perkins SF, San Juan MD, Smith DK, Cowan RL, Le NT, Kessler RM, Samanez-Larkin GR, Zald DH (2019) Lack of consistent sex differences in d-amphetamine-induced dopamine release measured with fallypride PET. *Psychopharmacology*. link
- 55. \*\*\*Holland CAC, Ebner NC, Lin T, **Samanez-Larkin GR** (2019) Emotion identification across adulthood using the Dynamic FACES database of emotional expressions in young, middle-aged, and older adults. *Cognition and Emotion*. pdf data/code/materials
- 54. Löckenhoff CE, Rutt JL, **Samanez-Larkin GR**, Gallagher C, O'Donoghue T, Reyna VF (2019) Age effects in sequence construction for a continuous cognitive task: similar sequence-trends but fewer switch-points. *Journals of Gerontology: Psychological Sciences*. pdf
- 53. Löckenhoff CE, Rutt JL, **Samanez-Larkin GR**, O'Donoghue T, Reyna VF (2019) Preferences for temporal sequences of real outcomes differ across domains but do not vary by age. *Journals of Gerontology:*Psychological Sciences. pdf
- \*Smith CT, San Juan DT, Dang LC, Katz DT, Perkins SF, Burgess LL, Cowan RL, Manning HC, Nickels ML, Claassen DO, **Samanez-Larkin GR**, Zald DH (2018). Ventral striatal dopamine transporter availability is associated with lower trait motor impulsivity in healthy adults. *Translational Psychiatry*, 8(1), 269. link data
- \*Seaman KL, \*\*\*Brooks N, \*\*Karrer TM, \*\*Castrellon JJ, \*Dang LC, Hsu M, Zald DH, Samanez-Larkin GR (2018) Subjective value representations during effort, probability, and time discounting across adulthood. Social Cognitive and Affective Neuroscience, 13(5), 449–459. PMC6007391 pdf data/code/materials neurovault

- 49. Leong JK, Hennigan K, **Samanez-Larkin GR**, Knutson B (2018) Neural circuits supporting incentivized inhibition. *Neurolmage*, 178, 435–444. pdf data/code/materials neurovault
- 48. \*Dang LC, **Samanez-Larkin GR**, \*\*\*Castrellon JJ, \*\*\*Perkins SF, Cowan RL, Zald DH (2018) Individual differences in dopamine D2 receptor availability correlate with reward valuation. *Cognitive Affective and Behavioral Neuroscience*, 18(4):739–747. PMC6072601 link
- 47. von Helverson B, Mata R, **Samanez-Larkin GR**, Wilke A (2018) Foraging, exploration, or search?: on the (lack) of convergent validity between three behavioral paradigms. *Evolutionary Behavioral Sciences*, 12(3), 152-162. pdf data
- 46. \*Dang LC, **Samanez-Larkin GR**, \*Smith CT, \*\*\*Castrellon JJ, \*\*\*Perkins SF, Cowan RL, Claassen DO, Zald DH (2018) FTO affects food cravings and interacts with age to influence age-related decline in food cravings. *Physiology and Behavior*, 192, 188–193. PMC5994171 pdf
- 45. Kircanski K, Notthoff N, DeLiema M, **Samanez-Larkin GR**, Shadel D, Mottola G, Carstensen LL, Gotlib IH (2018) Emotional arousal may increase susceptibility to fraud in older adults. *Psychology and Aging*, 33(2), 325–337. PMC6005691 pdf
- \*Seaman KL, Leong JK, Wu CC, Knutson B, Samanez-Larkin GR (2017) Individual differences in skewed financial risk taking across the adult life span. Cognitive Affective and Behavioral Neuroscience, 17(6), 1232–1241. PMC5709503 pdf data/code/materials
- 43. \*Dang LC, **Samanez-Larkin GR**, \*\*\*Castrellon JJ, \*\*\*Perkins SF, Cowan RL, Newhouse PA, Zald DH (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. PMC5602106 pdf
- 42. Hosking JG, Kastman EK, Dorfman HM, **Samanez-Larkin GR**, Baskin-Sommers A, Kiehl KA, Newman JP, Buckholtz JW (2017) Disrupted prefrontal regulation of striatal subjective value signals in psychopathy. *Neuron*, 95(1), 221–231. PMC5796650 pdf
- 41. \*\*Karrer TM, \*\*Josef A, Mata R, Morris ED, **Samanez-Larkin GR** (2017) Reduced dopamine transporters and receptors but not synthesis capacity in normal aging adults: a meta-analysis. *Neurobiology of Aging*, 57, 36–46. PMC5645072 pdf data/code/materials
- 40. \*Dang LC, \*\*\*Castrellon JJ, \*\*\*Perkins SF, Le NT, Cowan RL, Zald DH, **Samanez-Larkin GR** (2017) Reduced effects of age on dopamine D2 receptor levels in physically active adults. *NeuroImage*, 148, 123–129. PMC5344739 pdf data

- 39. Löckenhoff CE, Rutt JL, **Samanez-Larkin GR**, O'Donoghue T, Reyna VF, Ganzel B (2016) Dread-sensitivity in decisions about real and imagined electrical shocks does not vary by age. *Psychology and Aging*, 31 (8), 890–901. PMC5207791 pdf
- 38. \*Seaman KL, \*Gorlick MA, \*\*\*Vekaria KM, Hsu M, Zald DH, **Samanez-Larkin GR** (2016) Adult age differences in decision making across domains: Increased discounting of social and health-related rewards. *Psychology and Aging*, 31 (7), 737–746. PMC5127408 pdf data
- 37. \*Dang LC, **Samanez-Larkin GR**, \*\*\*Castrellon JJ, \*\*\*Perkins SF, Cowan RL, Zald DH (2016) Associations between dopamine D2 receptor availability and BMI depend on age. *NeuroImage*, 138, 176–183. PMC4927378 pdf
- 36. \*\*Josef AK, Richter D, **Samanez-Larkin GR**, Wagner GG, Hertwig R, Mata R (2016) Stability and change in risk-taking propensity across the adult life span. *Journal of Personality and Social Psychology*, 111 (3), 430–450. pdf
- 35. \*\*\*Kline RL, Zhang S, Farr OM, Hu S, Zaborksy L, **Samanez-Larkin GR**, Li CR (2016) The effects of methylphenidate on resting-state functional connectivity of the basal nucleus of meynert, locus coeruleus, and ventral tegmental area in healthy adults. *Frontiers in Neuroscience*, 10:149. PMC4834346 link
- 34. Leong JK, Pestilli F, Wu CC, **Samanez-Larkin GR**, Knutson B (2016) White-matter tract connecting anterior insula to nucleus accumbens correlates with reduced preference for positively skewed gambles. *Neuron*, 89 (1), 63–69. PMC4720154 pdf sup
- 33. \*Dang LC, **Samanez-Larkin GR**, \*\*\*Young JS, Cowan RL, Kessler RM, Zald DH (2016) Caudate asymmetry is related to attentional impulsivity and an objective measure of ADHD-like attentional problems in healthy adults. *Brain Structure and Function*, 221 (1), 277-86. PMC4433431 pdf
- 32. **Samanez-Larkin GR**, Knutson B (2015) Decision making in the ageing brain: changes in affective and motivational circuits. *Nature Reviews Neuroscience*, 16 (5), 278-289. pdf
- 31. **Samanez-Larkin GR** (2015) Decision neuroscience and aging. In TM Hess, J Strough, and CE Löckenhoff (Eds.). *Aging and decision making: Empirical and applied perspectives* (pp. 41–60). New York: Elsevier. pdf
- 30. Beas BS, Setlow, B, **Samanez-Larkin GR**, Bizon JL (2015) Modeling cost-benefit decision making in aged rodents. In TM Hess, J Strough, and CE Löckenhoff (Eds.). *Aging and decision making: Empirical and applied perspectives* (pp. 17–40). New York: Elsevier. pdf
- 29. **Samanez-Larkin GR**, Worthy DA, Mata R, McClure SM, Knutson B (2014) Adult age differences in frontostriatal representation of prediction error but not reward outcome. *Cognitive Affective and Behavioral Neuroscience*, 14 (2), 672–682. PMC4072917 pdf sup

- 28. Benningfield MM, Blackford JU, Ellsworth ME, **Samanez-Larkin GR**, Martin PR, Cowan RL, Zald DH (2014) Caudate responses to reward anticipation associated with delay discounting behavior in healthy youth. Developmental Cognitive Neuroscience, 7, 43–52. PMC3932556 link
- 27. Wu CC, **Samanez-Larkin GR**, Katovich K, Knutson B (2014) Affective traits link to reliable neural markers of incentive anticipation. *NeuroImage*, 84(1), 279–289. PMC3849140 <u>link</u>
- 26. Braver TS, Krug MK, Chiew KS, Kool W, Westbrook JA, Clement NJ, Adcock RA, Barch DM, Botvinick MM, Carver CS, Cools R, Custers R, Dickinson AR, Dweck CS, Fishbach A, Gollwitzer PM, Hess TM, Isaacowitz DM, Mather M, Murayama K, Pessoa L, **Samanez-Larkin GR**, Somerville LH (2014) Mechanisms of motivation-cognition interaction: challenges and opportunities. *Cognitive Affective and Behavioral Neuroscience*, 14 (2), 443–472. pdf
- 25. **Samanez-Larkin GR**, \*\*\*Hagen TA, \*\*\*Weiner DJ (2014) Financial decision making across adulthood. In E Bijleveld and H Aarts (Eds.) *The Psychological Science of Money* (pp. 121–135). New York: Springer.
- 24. **Samanez-Larkin GR**, Knutson B (2014) Reward processing and risky decision making in the aging brain. In V. Reyna & V. Zayas (Eds.) *The Neuroscience of Risky Decision Making* (pp. 123-142). Washington DC: American Psychological Association. pdf
- 23. Hills TT, Mata R, Wilke A, **Samanez-Larkin GR** (2013) Mechanisms of age-related decline in memory search across the adult life span. *Developmental Psychology*, 49(12), 2396–2404. PMC3842414 pdf
- 22. **Samanez-Larkin GR**, Buckholtz JW, Cowan RL, Woodward ND, Li R, Ansari MS, Arrington CM, Baldwin RM, Smith CE, Treadway MT, Kessler RM, Zald DH (2013) A thalamocorticostriatal dopamine circuit for psychostimulant-enhanced human cognitive flexibility. *Biological Psychiatry*, 74(2), 99–105. PMC3615042 pdf sup comment
- 21. Kuhnen CM, **Samanez-Larkin GR**, Knutson B (2013) Serotonergic genotypes, neuroticism, and financial choices. *PLoS ONE*, 8(1), e54632. PMC3559795 <u>link</u>
- 20. **Samanez-Larkin GR**, Li S, Ridderinkhof KR (2013) Complementary approaches to the study of decision making across the adult life span. *Frontiers in Neuroscience*, 7, 243. PMC3868708 link
- 19. Garrett DD, **Samanez-Larkin GR**, MacDonald SWS, Lindenberger U, McIntosh AR, Grady CL (2013) Moment-to-moment brain signal variability: A next frontier in human brain mapping? *Neuroscience and Biobehavioral Reviews*, 37(4), 610–624. PMC3732213 pdf
- 18. **Samanez-Larkin GR**, Levens SM, Perry LM, Dougherty RF, Knutson B (2012) Frontostriatal white matter integrity mediates adult age differences in probabilistic reward learning. *Journal of Neuroscience*, 32(15), 5333–5337. PMC3744863 pdf

- 17. Knutson B, **Samanez-Larkin GR** (2012) Brain, decision, and debt. In R. Brubaker, R.M. Lawless & C. Tabb (Eds.) *A Debtor World: Interdisciplinary Perspectives on Debt* (pp. 167–180). New York: Oxford University Press.
- Samanez-Larkin GR, Mata R, \*\*\*Radu PT, \*\*\*Ballard IC, Carstensen LL, McClure SM (2011) Age differences in striatal delay sensitivity during intertemporal choice in healthy adults. *Frontiers in Neuroscience*, 5, 126. PMC3217179 pdf
- 15. Mata R, Josef AK, **Samanez-Larkin GR**, Hertwig R (2011) Age differences in risky choice: A meta-analysis. *Annals of the New York Academy of Sciences*, 1235(1), 18–29. PMC3332530 pdf sup
- Knutson B, Samanez-Larkin GR, Kuhnen CM (2011) Gain and loss learning differentially contribute to life financial outcomes. *PLoS ONE*, 6(9), e24390.
   PMC3167846 pdf



- 13. **Samanez-Larkin GR**, Wagner AD, Knutson B (2011) Expected value information improves financial risk taking across the adult life span. *Social Cognitive and Affective Neuroscience*, 6(2), 207–217. PMC3073388 pdf sup
- Carstensen LL, Turan B, Scheibe S, Ram N, Ersner-Hershfield H, Samanez-Larkin GR, Brooks K, Nesselroade J (2011) Emotional experience improves with age: Evidence based on over 10 years of experience sampling. *Psychology and Aging*, 26(1), 21–33. PMC3332527 pdf
- 11. **Samanez-Larkin GR**, Carstensen LL (2011) Socioemotional functioning and the aging brain. In J. Decety and J. Cacioppo (Eds.) *The Oxford Handbook of Social Neuroscience* (pp. 507–521). New York: Oxford University Press. pdf
- Samanez-Larkin GR, Kuhnen CM, \*\*\*Yoo DJ, Knutson B (2010) Variability in nucleus accumbens activity mediates age-related suboptimal financial risk taking. *Journal of Neuroscience*, 30(4), 1426–1434. PMC2821055 pdf sup cover comment
- Kwon Y, Scheibe S, Samanez-Larkin GR, Tsai JL, Carstensen LL (2009)
   Replicating the positivity effect in picture memory in Korean younger and older adults: Evidence for cross-cultural universality. *Psychology and Aging*, 24(3), 748–754. PMC2775417 pdf
- 8. **Samanez-Larkin GR**, Robertson ER, Mikels JA, Carstensen LL, Gotlib IH (2009) Selective attention to emotion in the aging brain. *Psychology and Aging*, 24(3), 519–529. PMC2775417 pdf

3/7/19

- 7. Ersner-Hershfield H, Garton MT, Ballard K, **Samanez-Larkin GR**, Knutson B (2009) Don't stop thinking about tomorrow: Individual differences in future self-continuity account for saving. *Judgment and Decision Making*, 4(4), 280–286. PMC2747683 pdf
- 6. **Samanez-Larkin GR**, \*\*\*Hollon NG, Carstensen LL, Knutson B (2008) Individual differences in insular sensitivity during loss anticipation predict avoidance learning. *Psychological Science*, 19(4), 320–323. PMC2365707 pdf
- 5. **Samanez-Larkin GR**, D'Esposito M (2008) Group comparisons: Imaging the aging brain. *Social Cognitive and Affective Neuroscience*, 3(3), 290–297. PMC2563421 pdf
- 4. **Samanez-Larkin GR**, Gibbs SEB, \*\*\*Khanna K, Nielsen L, Carstensen LL, Knutson B (2007) Anticipation of monetary gain but not loss in healthy older adults. *Nature Neuroscience*, 10(6), 787–791. PMC2268869 pdf sup [Selected as one of the top ten scientific advances of 2007 by the National Institute on Aging]
- 3. Mikels JA, **Larkin GR**, Reuter-Lorenz PA, Carstensen LL (2005) Divergent trajectories in the aging mind: Changes in working memory for affective versus visual information with age. *Psychology and Aging*, 20(4), 542–553. PMC2746384 pdf
- 2. Mikels JA, Fredrickson BL, **Larkin GR**, Lindberg CM, Maglio SJ, Reuter-Lorenz PA (2005). Emotional category data on images from the International Affective Picture System. *Behavior Research Methods*, 37(4), 626–630. PMC1808555 pdf
- 1. Fredrickson BL, Tugade MM, Waugh CE, **Larkin GR** (2003) What good are positive emotions in crises?: A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology*, 84, 365–376. PMC2755263 pdf

### Working Papers

- \*\*Karrer TM, \*\*\*McLaughlin CL, \*\*\*Guaglianone CP, **Samanez-Larkin GR** (2019, under review) Reduced serotonin receptors and transporters in normal aging adults: a meta-analysis of PET and SPECT imaging studies. preprint
- \*\*Juarez EJ, \*\*Castrellon JJ, \*\*Green MA,\*\*\*Crawford JL, \*Seaman KL, \*Smith CT, \*Dang LC, Matuskey D, Morris ED, Cowan RL, Zald DH, **Samanez-Larkin GR** (2019, under review) Reliability of the correlative triad among aging, dopamine D2-like receptor availability, and cognition. <u>preprint</u>

Löckenhoff CE, **Samanez-Larkin GR** (2019, under review) Age differences in intertemporal choice: the role of task type, outcome characteristics, and covariates.

\*\*Castrellon JJ,\*\*\*Young JS, \*Dang LC, Zald DH, **Samanez-Larkin GR** (2019, in prep) Mesolimbic dopamine D2 receptors and neural representations of subjective value.

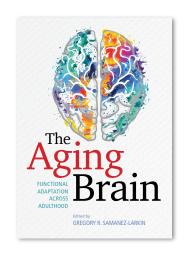
\*\*Green MA, \*\*\*Crawford JL, \*Seaman KL, Kuhnen CM, **Samanez-Larkin GR** (2019, in prep) Generalized associations between dopamine receptor availability and risky investment decision making.

\*\*Bazley WJ, Korniotis GM, Samanez-Larkin GR (2018, working paper) Why investors do not learn SSRN

### Edited Volumes

The Aging Brain: Functional Adaptation Across Adulthood (forthcoming, 2019) GR Samanez-Larkin (Ed.). American Psychological Association.

Decision Making Over the Life Span (2011) GR Samanez-Larkin (Ed.). New York: Annals of the New York Academy of Sciences. link



#### **Grants**

Active

NIA/NIH <u>R01-AG058547</u> Samanez-Larkin, Cabeza (MPI) 8/15/2018–3/31/2023

Effects of Aging on Episodic Memory-Dependent Decision Making

Research grant to examine how individual differences in episodic memory are related to adult age differences in multi-attribute and future-oriented decision making.

Role: PI \$3,052,360 (\$1,919,269 direct costs, \$1,133,091 indirect costs)

NIA/NIH P30-AG034424 (Sub4) O'Rand (PI) 7/1/2018-6/30/2019

Center for Population Health and Aging (parent award)

Optimizing Physical Activity-Related Health Promotion Across Adulthood Using Neuroimaging (pilot fund) Pilot research grant from the Duke Center for Population Health and Aging (CPHA) to use neuroimaging to optimize messaging for a digital health intervention aimed at increasing physical activity and healthy food choice in adults in the community.

Role: Pilot Grant PI \$25,000 direct costs

Bass Connections/Duke Samanez-Larkin, Castrellon, Green (Project Leaders) 7/1/2018–6/30/2020 Using Neuroscience to Optimize Digital Health Interventions across Adulthood

Vertically integrated team research project combining approaches from neuroscience, psychology and global health to identify ways to individually motivate adults to become more physically active in daily life.

Role: Project Leader \$50,000 + \$36,000 supplemental direct costs

NIA/NIH R24-AG054355 Samanez-Larkin (PI) 9/15/2016-3/31/2021

Scientific Research Network on Decision Neuroscience and Aging

Network grant to support dissemination and training activities related to the emerging multidisciplinary science of decision making and aging.

Role: PI \$1,443,412 (\$861,738 direct costs, \$581,674 indirect costs)

NIA/NIH R25-AG053213 Samanez-Larkin (PI) 9/15/2016-4/30/2021

Short Courses in Neuroeconomics and Social Neuroscience

Grant to support preconference workshops and an annual summer school in neuroeconomics and social

neuroscience.

Role: PI \$650,025 (\$607,801 direct costs, \$42,224 indirect costs)

NIA/NIH R25-AG053252 Carstensen, Samanez-Larkin (MPI) 9/15/2016-4/30/2021

Forming Science-Industry Partnerships to Link Everyday Behaviors to Well-Being

Grant to support an initiative that would facilitate collaborations between scientists and the private sector focused on improving financial and physical health and well being.

Role: PI \$646,959 (\$601,880 direct costs, \$45,079 indirect costs)

Completed

NIA/NIH <u>R01-AG043458</u> Zald, Samanez-Larkin (MPI) 2/15/2014–1/31/2019

Dopaminergic Neuromodulation of Decision Making in Young and Middle-Aged Adults

Research grant to assess the influence of dopamine receptors/transporters/release and dopaminergic drugs on decision preferences in early career (young) and pre-retirement (middle-aged) adults.

Role: PI \$2,337,91 (\$1,601,162 direct costs, \$736,799 indirect costs)

NIA/NIH R21-AG049293 Levy (PI) 9/30/2015-4/30/2018

Medical Decision-making under Uncertainty in Older Adults

Research grant to examine the behavioral and neurobiological processes that characterize decision making under risk and ambiguity by younger and older adults in financial versus medical domains.

Role: Co-Investigator \$416,250 (\$250,000 direct costs, \$166,250 indirect costs)

NIA/NIH R00-AG042596 Samanez-Larkin (PI) 9/30/2014-3/31/2018

Neuromodulation of Motivated Cognition and Decision Making Across Adulthood

Pathway to Independence Award supporting research on the influence of motivation and cognition on decision making using multimodal neuroimaging including fMRI and PET imaging of dopamine receptors.

Role: PI \$746,756 (\$448,502 direct costs, \$298,254 indirect costs)

NIA/NIH <u>R21-AG043741</u> Löckenhoff (PI) 7/1/2013–6/30/2016

Age Differences in Preferences for and Responses to Temporal Sequences

Research grant to quantify adult age differences in sequence preferences for monetary payouts, effortful performance, and aversive physical outcomes and investigate relevant explanatory variables.

Role: Co-Investigator \$405,682 (\$275,000 direct costs, \$130,682 indirect costs)

NIA/NIH <u>R01-AG044838</u> Zald (PI) 9/30/2012–5/31/2016

Dopaminergic Modulation of Subjective Valuation Across Adulthood

Research grant to assess the influence of individual and age differences in dopamine receptors and frontostriatal network function on individual differences in decision preferences across the adult life span.

Role: Co-PI \$1,616,470 (\$1,112,063 direct costs, \$504,407 indirect costs)

NIA/NIH <u>R24-AG039350</u> Carstensen, Samanez-Larkin (MPI) 9/30/2010–5/31/2015

Scientific Research Network on Decision Neuroscience and Aging

Network grant to support dissemination and training activities related to an emerging multidisciplinary science of decision making and aging.

Role: PI

FINRA Investor Education Foundation Knutson (PI) 2/1/2011–10/31/2013 Individual Differences in Susceptibility to Investment Fraud

Research grant to examine individual differences in cognitive and emotional characteristics associated with fraud victimization. The study compares actual investment fraud victims to age-matched controls.

Role: Co-Investigator

NIA/NIH K99-AG042596 Samanez-Larkin (PI) 8/1/2012–7/31/2013

Neuromodulation of Motivated Cognition and Decision Making Across Adulthood

Post-doctoral phase of Pathway to Independence Award supporting research on the influence of motivation on cognitive control and decision making using multimodal neuroimaging including fMRI and PET imaging.

Role: PI

NIA/NIH F32-AG039131 Samanez-Larkin (PI) 7/1/2011-7/31/2012

Imaging the Human Reward System Across the Adult Life Span

Individual post-doctoral fellowship supporting training in multimodal (MRI, PET) neuroimaging of reward.

Role: PI

NIA/NIH F31-AG032804 Samanez-Larkin (Pl) 1/1/2009–9/30/2010

Incentive Learning and Decision Making in the Aging Brain

Individual pre-doctoral fellowship supporting the final two years of graduate training in aging and neuroeconomics.

Role: PI

FINRA Investor Education Foundation Knutson (PI) 2006–2010

Individual Differences in Financial Risk Taking Across the Life Span

Research grant to examine individual differences in cognitive and emotional characteristics associated with financial risk taking and decision making across adulthood.

Role: Co-Investigator

NIA/NIH <u>P30-AG017253</u> (Sub) Garber (PI) 2007–2009

Center on the Demography and Economics of Health and Aging (parent award)

Incentive Learning and Decision Making in Younger and Older Adults (pilot fund)

Pilot research grant from the Stanford Center on the Demography and Economics of Health and Aging (<u>CDEHA</u>) to examine age differences in reinforcement learning and value processing in younger and older adults.

Role: Pilot Grant Co-PI \$40,000

NIA/NIH <u>P30-AG024957</u> (Sub) Garber (PI) 2006–2008

Center on Advancing Decision Making for Aging (parent award)

Choosing Not to Choose: Ambiguity Aversion in Younger and Older Adults (pilot fund)

Pilot research grant from the Stanford Center on Advancing Decision Making for Aging (<u>CADMA</u>) to examine age differences in ambiguity and risk aversion in younger and older adults.

Role: Pilot Grant Co-PI \$30,000

NIA/NIH P30-AG024957 (Sub) Garber (PI) 2005–2007

Center on Advancing Decision Making for Aging (parent award)

Risk-Taking and Decision-Making Over the Life Span (pilot fund)

Pilot research grant from the Stanford Center on Advancing Decision Making for Aging (<u>CADMA</u>) to examine age differences in financial risk taking in healthy adults.

Role: Pilot Grant Co-Pl \$40,000

## **Awards**

Randolph Blake Early Career Award (for exemplary alumni)	Vanderbilt University	2019
Best Poster Award for Castrellon (presenter) & Samanez-Larkin	Society for Neuroeconomics	2018
Top 5% of Undergraduate Instructors in the Natural Sciences	Duke University Fall 2017, Sprin	g 2018,
	Fa	all 2018
Junior Faculty Fellowship	Yale University	2016
Poorvu Family Award for Interdisciplinary Teaching	Yale University	2015
Theresa Seessel Postdoctoral Fellowship for Faculty	Yale University	2014
NIH Pathway to Independence Award (K99/R00)	National Institute on Aging	2012
Post-Doctoral Fellows Award	Cognitive Neuroscience Society	2012
Rising Star	Association for Psychological Science	e2012
Post-Doctoral National Research Service Award (F32)	National Institute on Aging	2011
Distinguished Dissertation Award in the Social Sciences	Council of Graduate Schools & UMI	2010
Doctoral Dissertation Award in the Psychology of Aging	APA Division 20	2010
Albert H. and Barbara R. Hastorf Prize for Teaching	Stanford University	2010
Pre-Doctoral National Research Service Award (F31)	National Institute on Aging	2009
Department of Psychology Teaching Award	Stanford University	2008
Top 10 Scientific Advances of 2007	National Institute on Aging	2007
Summer School in Neuroeconomics Fellowship	Stanford University	2006
W.B. Pillsbury Distinguished Thesis Award	University of Michigan	2002
University Honors	University of Michigan	2002
Psi Chi Psychology Honors Society	University of Michigan	2001
Branstrom Prize for Freshman Scholars (Top 10% of class)	University of Michigan, Flint	1999

## **Invited Talks**

2019	Social & Affective Neuroscience Society Conference, Miami, FL
2019	Neuroscience colloquium, Rutgers University, New Brunswick, NJ
2018	Workshop on Behavior Change in Older Adults, Research Centers Collaborative Network, Bethesda, MD
2018	Center for Vital Longevity Colloquium, University of Texas Dallas, Dallas, TX
2018	Workshop on Dementia, Financial Capacity, and the Law, Petrie-Flom Center, Harvard, Cambridge, MA
2018	Our Aging Brains, Harvard Law School & Massachusetts General Hospital, Cambridge, MA (video)
2017	Clinical Psychology Lunch Series, University of North Carolina, Chapel Hill, NC
2017	Grand Rounds, Department of Psychiatry and Behavioral Sciences, Duke University, Durham, NC
2017	Cognitive Studies Seminar, University of Miami, Miami, FL
2017	Bernoulli Symposium on Risk, University of Basel, Basel, Switzerland
2017	Applied Experimental Seminar, Department of Psychology, University of Central Florida, Orlando, FL

- 2016 Cognitive Neuroscience lecture series, Florida International University, Miami, FL
- 2016 <u>Behavioral Decision Making Group Colloquium</u>, Anderson School of Management, UCLA, Los Angeles, CA
- 2016 Colloquium, Department of Psychology, Stanford University, Stanford, CA (video)
- 2016 Affective Science Seminar, Department of Psychology, Stanford University, Stanford, CA
- 2016 <u>Senior Investor Protection Regional Workshop</u> (Keynote Address), SIFMA, Tampa, FL
- 2016 Panelist, Societal & Ethical Implications of Decision Neuroscience, Fox School of Business, Philadelphia PA
- 2016 <u>Interdisciplinary Symposium on Decision Neuroscience</u>, Fox School of Business, Temple, Philadelphia, PA
- 2016 Pension Research Council Symposium, The Wharton School, University of Pennsylvania, Philadelphia, PA
- 2016 Department of Psychology and Neuroscience, Duke University, Durham, NC
- 2016 Department of Psychology and Neuroscience, University of North Carolina, Chapel Hill, NC
- 2015 Behavioral Economics and Decision Research, Johnson School, Cornell University, Ithaca, NY (video)
- 2015 Finance Brown Bag, Yale School of Management, Yale University, New Haven, CT
- 2015 Finance Department, University of Miami School of Business Administration, Miami, FL
- 2015 Older Investors Summit, Insured Retirement Institute, New York, NY
- 2015 Kavli BRAIN Coffee Hour, Yale University, New Haven, CT
- 2015 Affective Brain Lab, University College London, UK
- 2015 Cognition and Perception colloquium, New York University, New York, NY
- 2014 Magnetic Resonance Research Center, Yale University, New Haven, CT
- 2014 Center for Decision Sciences, Columbia Business School, New York, NY
- 2014 Senior Investors Forum: Serving the Needs of Aging Investors (Keynote Address), SIFMA, Chicago, IL
- 2014 Planning Meeting on Economic Decision Making in Aging Populations, National Academy of Sciences, DC
- 2014 Sackler Institute for Developmental Psychobiology, Weill Cornell Medical College, New York, NY
- 2014 Microeconomic Theory Lunch, Department of Economics, Yale University, New Haven, CT
- 2013 Mechanisms of Motivation Cognition and Aging Interactions, Washington, DC
- 2013 Department of Psychology, University of California Los Angeles, Los Angeles, CA
- 2013 Davis School of Gerontology, University of Southern California, Los Angeles, CA
- 2012 Department of Psychology, Yale University, New Haven, CT
- 2012 Institute on Aging & McKnight Brain Institute, University of Florida, Gainesville, FL
- 2012 Center for Cognitive Medicine, Vanderbilt University School of Medicine, Nashville, TN
- 2011 Bronfenbrenner Conference on The Neuroscience of Risky Decision Making, Ithaca, NY (discussant)
- 2011 Max Planck Institute for Human Development, Berlin, Germany
- 2010 Council of Graduate Schools Annual Meeting (Dissertation Award Address), Washington, DC
- 2010 Center for Advanced Brain Imaging, Georgia Tech / Georgia State, Atlanta, GA
- 2010 Annual Meeting of the Society for Neuroeconomics, Evanston, IL
- 2010 National Institute on Aging Workshop on Refining Economic Phenotypes, Evanston, IL
- 2010 Cognitive Ability in Aging Conference, Center for Advanced Study in the Behavioral Sciences, Stanford, CA

Introduction to Statistical Methods in Psychologous Neuroscience Applications for Everyday Dec (NEUROSCI / PSY 462S)	Duke Duke	S18 evals, S19 F17 evals, F18 evals	
Statistics (PSYC 200)  Decision Neuroscience (PSYC 458)		Yale Yale	S14 evals, S16 evals F13 evals, F14 evals
Research Topics in Decision Neuroscience &	k Aging (PSYC 734)	Yale	F13-S16
Longevity (Psych 102 / Neurology 202)	Teaching Assistant	Stanford	W07, W08, W09
Intro Stat Methods (Stat 60 / Psych 10)	Teaching Assistant	Stanford	A07, A08
Cognition and the Brain (Psychology 55)	Teaching Assistant	Stanford	W07
Community Outreach (Psychology 306)	Undergrad Student Instructor	Michigan	F01

## Mentoring

Post-Doctoral Fellows

Candace Brown, Post-Doc, Duke 2018-

Kendra Seaman, Post-Doc, Yale 2015-2017, Duke 2017-

Chris T Smith (co-mentored with David Zald), Post-Doc, Vanderbilt 2016–2018 (Postdoc Program Mgr, NCSU)

Linh Dang (co-mentored with David Zald), Post-Doc, Vanderbilt 2013-2017 (Google, Mountain View, CA)

Marissa Gorlick, Post-Doc, Yale 2014–2015 (Data Scientist, CreativeLive, SF)

Matthew Nassar, Post-Doc (K99 co-mentor/consultant), Brown 2017–2018 (Assistant Professor, Brown)

Graduate Students

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

Zachary Monge (cognitive neuroscience), Major Area Paper & Dissertation Committee, Duke 2017-2019

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

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

Lab Managers / Project Coordinators / Research Technicians

Eliana Armora, Duke 2018-

Sade Abiodun, Duke 2018-

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 (RA at NYU)

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

Undergraduate Students - Primary Advisor

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 (MD at Icahn Mount Sinai)

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

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

Michael Model, BA in Statistical Science (Economics minor, Decision Science certificate), 2020

Natalia Espinosa, BS in Neuroscience, 2019

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

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

Zachary Spiera, BS in Neuroscience with Distinction, 2018 (MD at Icahn 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, Seattle)

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

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

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 University 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 at Harvard Medical School)

\*Angier Prize recipient, awarded to the best senior project on a psychological topic, Yale University

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

Marina Addams, BS in Psychology, Yale 2014 (Graze, NY)

Andy Berry, BS in Psychology, Yale 2014 (MM in opera at Yale School of Music)

Hobart Lim, Dual BA in Cognitive Science and 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 (Dropbox, SF)

Erica Reetz, BS in Psychology, Yale 2014 (Management Associate, McMaster-Carr, Chicago)

Nicole Wenger, BA in Cognitive Science, Yale 2014 (RA at Yale School of Medicine)

Kruti Vekaria, Post-Bacc RA, Vanderbilt University 2013–2014 (PhD in psychology at Georgetown University) Jacob Young, Post-Bacc RA, Vanderbilt 2012–2013 (MD 2017 from U Chicago, neurosurgery resident UCSF) Lydia Qualls, BA in Psychology, Vanderbilt, 2013 (RA at Vanderbilt Kennedy Center)

Te Thamrongrattanarit, BS in Symbolic Systems, Stanford, 2009 (computer science PhD at Brandeis) Nick Hollon, Post-bacc RA, Stanford 2008 (neurobiology PhD at U Washington) Kabir Khanna, BA in Human Biology, Stanford, 2007 (political science PhD at Princeton)

Undergraduate Students - Co-Advised

Ryan Kline, BS in Psychology, Yale 2015 (Mark Cuban Companies)

Tyler Reynolds, BA in Cognitive Science, Yale 2014 (pursuing tech startup)

Undergraduate Students – Thesis Committee Member

Daniel Getman, BS in Neuroscience with Distinction, 2019

Chandler Richards, BA in Neuroscience with Distinction, 2019

Shivani Chandrashekaran, BS in Neuroscience with Distinction, 2018 (RA at Stanford School of Medicine)

Jack Dolgin, BS in Neuroscience with Distinction, 2018 (RA at Duke University)

Dan McGough, BS in Neuroscience with Distinction, 2018

# **Service and Professional Activities**

			_	! .				
D	$\triangle$	n	2	rti	m	$\cap$	n	T
$\sim$	$\cup$	$\sim$	u	l LI	1.	-	ΙI	L

Arts & Sciences Council alternate rep from the Department of Psychology & Neuroscience, Duke Academic major advisor, Neuroscience, Department of Psychology & Neuroscience, Duke Academic major advisor, Psychology, Department of Psychology & Neuroscience, Duke Undergraduate Neuroscience Track Advisor, Department of Psychology, Yale Cognitive Area Faculty Search Committee, Department of Psychology, Yale Targets of Opportunity Faculty Search Committee, Department of Psychology, Yale	2018/2019 2018– 2018– 2013–2016 2015 2014
Colloquium Committee, Center for Cognitive Neuroscience, Duke Institute for Brain Sciences Faculty organizer, Center for Cognitive Neuroscience spring retreat, DIBS, Duke Steering Committee, Cognitive Neuroscience Admitting Program, Duke Institute for Brain Sciences Program Faculty, Postdoctoral Training Program, Center for Aging & Human Development, Duke Faculty Affiliate, Duke-UNC Brain Imaging and Analysis Center (BIAC), Duke Faculty Affiliate, Duke Center for Interdisciplinary Decision Science (D-CIDES), Duke Faculty Affiliate, Duke University Population Research Institute (DUPRI), Duke Faculty Affiliate, Center for Population Health and Aging, Duke Panelist, Valuing Diversity in Teaching and Learning, CTL Spring Teaching Forum, Yale Committee on Teaching and Learning, Yale Faculty Lecturer, Cultural Connections, Yale Social Science Faculty Panelist, Bulldog Days, Yale	2018/2019 2018 2017– 2017– 2017– 2017– 2017– 2017– 2016 2015/2016 2014, 2015 2014
Affiliated External Faculty, Aging & Brain Health Collaborative, Rutgers University Program committee, Social and Affective Neuroscience Society annual meeting, Miami, FL Local organizing committee, International Symposium on Decision Neuroscience, Durham, NC Consulting Editor, Editorial Board, Psychology and Aging (APA) Co-Organizer, Forming Science-Industry Research Collaborations, Stanford, CA Symposium Chair (Social and Affective Decision Making), SANS Conference, Los Angeles, CA Organizer, Tools of the Trade Neuroimaging Workshop, Los Angeles, CA Founding Director, Summer School in Social Neuroscience and Neuroeconomics Symposium Chair (Learning and Memory), Society for Neuroeconomics Conference, Miami, FL Conference Program Committee, Society for Neuroeconomics Organizer, SRNDNA Conference on Decision Neuroscience and Aging, Miami, FL Co-Organizer, SRNDNA Translational Modeling Workshop, Miami, FL Co-Organizer, SRNDNA Translational Workshop, Saint Petersburg, FL Program Committee, MoMCAI Meeting on Motivation Cognition & Aging, Washington, DC White House Workshop on Behavioral Science and Policy (NIA/APS/CEA), Washington, DC	2019– 2019 2019 2018– 2018– 2017 2017 2017–2020 2015 2015 2015 2015 2014 2013 2013

Organizer, SRNDNA Workshop on Multi-Level Modeling, Evanston, IL	2011
Founding Director, Scientific Research Network on Decision Neuroscience and Aging (SRNDNA)	2010-2021
Participant, Economic Phenotypes Workshop (NIA), Evanston, IL	2010
Participant, Neuroeconomics and Aging Meeting (NIA), Evanston, IL	2009
Opportunities for Advancing Behavioral and Social Research on Aging (NIA/APS), Chicago, IL	2008
Cognitive Training Summit (NIA/SCL/MPI), Stanford, CA	2008
Participant, Behavioral Perspectives on Medicare Part D (NIA), Berkeley, CA	2006
Participant, Workshop on Neuroeconomics and Aging (NIA), Stanford, CA	2006
Symposium Chair (Affective Neuroscience of Aging), GSA Conference, Dallas, TX	2006

### Ad-hoc Reviewer Publons Metrics

General

Annals of the New York Academy of Sciences; eLife; Nature Human Behaviour; PLoS ONE; Proceedings of the National Academy of Sciences (PNAS); Science; Scientific Reports

Psychology / Cognitive Science / Gerontology

Aging Neuropsychology and Cognition; Behavior Research Methods; Cognition and Emotion; Developmental Psychology; Emotion; Health Psychology; Journal of Experimental Psychology: General; Journal of Gerontology: Medical Sciences; Psychological Medicine; Psychological Science; Psychology and Aging; Trends in Cognitive Sciences

Neuroscience / Biology / Medicine

Behavioural Brain Research; Behavioral Neuroscience; Biological Psychiatry; Brain Research; Cerebral Cortex; Cognitive Affective and Behavioral Neuroscience; Current Biology; eNeuro; Frontiers in Neuroscience; Journal of the American Medical Association (JAMA); Human Brain Mapping; Journal of Cognitive Neuroscience; Journal of Neuroscience; Neurobiology of Aging; Neurolmage; Neuropsychologia; Neuropsychology; Social Cognitive and Affective Neuroscience

Finance / Economics / Business

Management Science; Review of Finance

Grants

Arizona Alzheimer's Disease Core Center; US National Science Foundation; Swiss National Science Foundation (CH); Velux Stiftung (CH); Wellcome Trust (UK)

Book Proposals

Oxford University Press

#### **Guest Editor**

Direct Submission Editor, Proceedings of the National Academy of Sciences (PNAS), 2017

Topic Editor, Frontiers in Decision Neuroscience (Decision Making Across the Life Span), 2012–2013 Volume Editor, Annals of the New York Academy of Sciences (Decision Making Over the Life Span), 2011

## **Press Coverage**

Samanez-Larkin GR (2013) Financial decision making and the aging brain. Observer, 26(5), 30-33.

Complete news and press coverage available here: <a href="http://mcablab.science/news">http://mcablab.science/news</a>