

ALYSSA H. SINCLAIR, PH.D. | Curriculum Vitae

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Keywords: learning & memory, belief updating, behavior change, motivation, emotion

Employment

Assistant Professor – Rice University, Department of Psychological Sciences July 2026 (Incoming)

Joan Bossert Postdoctoral Research Fellow – University of Pennsylvania July 2023 – Present

Affiliations: Communication Neuroscience Lab (PI: Emily Falk);
Annenberg School for Communication; Penn Center for Science,
Sustainability, and the Media

Education

Ph.D., Duke University – *Psychology & Neuroscience, Certificate in Cognitive Neuroscience* Aug 2018 –
Cumulative GPA: 4.0/4.0 May 2023

Dissertation: [“Pre-Learning Interventions Modulate Learning from Error”](#)

Co-Advisors: Prof. R. Alison Adcock & Prof. Gregory R. Samanez-Larkin

Committee Members: Prof. Elizabeth Marsh & Prof. Felipe De Brigard

B.Sc. with High Distinction, University of Toronto – *Psychology (Research Specialist)* Sep 2014 –
Cumulative GPA: 4.0/4.0, *Valedictorian* May 2018

Honors Thesis: “Prediction Error Influences Episodic Memory Reconsolidation”

Thesis Advisor: Prof. Morgan Barense

Publications (in order of recency)

- Sinclair, A.H., Cosme, D., Lydic, K., Reiner, D.A., Carreras-Tartak, J., Mann, M., & Falk, E.B. (2025). [Behavioral interventions motivate action to address climate change](#). *PNAS*, 122(20).
- Cosme, D., Chan, H.Y., Sinclair, A.H., Benitez, C., Lydic, K., Martin, R., Resnick, A., Carreras-Tartak, J., Cooper, N., Paul, A.M., Koelle, D., McVay, J., Falk, E.B., & Scholz, C. (2025). [Perceived self and social relevance of content motivates news sharing across cultures and topics](#). *PNAS Nexus*, 4(2).
- Sinclair, A.H., Wang, Y.C., & Adcock, R.A. (2024). [First impressions or good endings? Preferences depend on when you ask](#). *Journal of Exp. Psychology: General*, 153(10).

Publications (continued)

4. Kemp, P.L. *, Sinclair, A.H. *, Adcock, R.A., & Wahlheim, C.N. (2024). [Memory and belief updating following complete and partial reminders of fake news](#). *Cognitive Research: Practice & Implications*, 9(28). * equal contribution
5. Sinclair, A.H. *, Wang, Y.C. *, & Adcock, R.A. (2023). [Instructed motivational states bias reinforcement learning and memory formation](#). *Proceedings of the National Academy of Sciences of the U.S.A.*, 120(31). * equal contribution
6. Sinclair, A.H., Taylor, M.K., Brandel-Tanis, F., Davidson, A., Chande, A.T., Rishishwar, L., Andris, C., Adcock, R.A., Weitz, J.S., Samanez-Larkin, G.R., & Beckett, S.J. (2023). [Communicating COVID-19 exposure risk with an interactive website counteracts risk misestimation](#). *PLOS ONE*, 18(10).
7. Sinclair, A.H., Taylor, M.K., Davidson, A., Weitz, J.S., Beckett, S.J., & Samanez-Larkin, G.R. (2023). [Scenario-based messages on social media motivate COVID-19 information seeking](#). *Journal of Applied Research in Memory and Cognition*.
8. Sinclair, A.H., Taylor, M.T., Weitz, J.S., Beckett, S., & Samanez-Larkin, G.R. (2023). [Reasons for receiving or not receiving bivalent COVID-19 booster vaccinations among adults](#). *Morbidity & Mortality Weekly Report*, 72(3).
9. Sinclair, A.H., Manalili, G.M., Brunec, I.K., Adcock, R.A., & Barense, M.D. (2021). [Prediction errors disrupt hippocampal representations and update episodic memories](#). *Proceedings of the National Academy of Sciences of the U.S.A.* 118(51).
10. Sinclair, A.H., Hakimi, S., Stanley, M.L., Adcock, R.A., & Samanez-Larkin, G.R. (2021). [Pairing facts with imagined consequences improves pandemic-related risk perception](#). *Proceedings of the National Academy of Sciences of the U.S.A.*, 118(32).
11. Sinclair, A.H., Stanley, M.L., Hakimi, S., Cabeza, R., Adcock, R.A., & Samanez-Larkin, G.R. (2021). [Imagining a personalized scenario selectively increases perceived risk of viral transmission for older adults](#). *Nature Aging*, 1, 677-683.
12. Sinclair, A.H., Stanley, M.L., & Seli, P. (2020). [Closed-minded cognition: Right-Wing Authoritarianism is negatively related to belief updating following prediction error](#). *Psychonomic Bulletin and Review*, 27, 1348-1361.
13. Stanley, M.L., Sinclair, A.H., & Seli, P. (2020). [Intellectual humility and perceptions of political opponents](#). *Journal of Personality*, 88(6), 1-21.
14. Sinclair, A.H. & Barense, M.D. (2019). [Prediction error and memory reactivation: How incomplete reminders drive reconsolidation](#). *Trends in Neurosciences*, 42(10), 728-740.
15. Sinclair, A.H. & Barense, M.D. (2018). [Surprise and destabilize: Prediction error influences episodic memory reconsolidation](#). *Learning & Memory*, 25(8), 369-381.

Preprints

1. Sinclair, A.H., Taylor, M., Beckett, S., Weitz, J., & Samanez-Larkin, G.R. (2024). [Personalized feedback about immunity corrects risk misestimation and motivates vaccination.](#)
2. Sinclair, A.H., Cosme, D., Carreras-Tartak, J., & Falk, E.B. (2024). [Affective framing of environmental news headlines influences engagement, donations, and memory.](#)
3. Sinclair, A.H., Hsiung, A., Wright, R., Hakimi, S., & Adcock, R.A. (2024). [Pausing to reflect during news consumption counteracts negativity biases in memory.](#)

Fellowships

Joan Bossert Postdoctoral Research Fellowship, <i>University of Pennsylvania</i>	2023–25
Graduate Research Fellowship, <i>National Science Foundation</i>	2019–23
Postgraduate Scholarship, <i>Natural Sci. and Eng. Research Council of Canada</i>	2019–22
James B. Duke Graduate Fellowship, <i>Duke University</i>	2018–2022
NSERC Canada Graduate Scholarship- Master's (<i>Declined</i>)	2018
NSERC Undergraduate Student Research Award, <i>University of Toronto</i>	2018

Grants

Applied Research on Intellectual Humility Co-PIs: R. Hoyle, E. Davisson, & A. Sinclair	2023–26
Title: “Social and Psychological Mechanisms that Contribute to Humble Processing of Information that Challenges Personal Opinions and Beliefs”	\$250,000
Funding Agency: John Templeton Foundation	
Coronavirus Contract Co-PIs: J. Weitz & G.R. Samanez-Larkin	2021–23
Title: “Modeling SARS-CoV-2 Risk, Interventions, and Impacts on Healthcare”	\$600,000
Funding Agency: Centers for Disease Control and Prevention (CDC)	
Role: Co-investigator, lead researcher for Aim 3 (interventions for risk perception)	
Psychology & Neuroscience Outreach Grant Co-PIs: A. Hsiung & A. Sinclair	2021–22
Title: “Promoting Equitable Access to Cognitive Research: A Comprehensive Internship Program for Undergraduates”	\$36,434
Funding Agencies: Duke University, Charles Lafitte Foundation	
Research Germinator Grant PI: A. Sinclair	2019–22
Title: “Learning from Error: Cognitive, Motivational, and Neural Mechanisms”	\$25,000
Funding Agency: Duke Institute for Brain Sciences	
Special Topics COVID-19 Research Grant PI: A. Sinclair	2020–21
Title: “Affective States and Information Seeking During the COVID-19 Pandemic”	\$2,500
Funding Agency: Duke University, Charles Lafitte Foundation	

Awards & Honors

Conference Travel Awards, <i>Duke University</i>	2022, 2023
Trainee Professional Development Award, <i>Society for Neuroscience</i>	2019
Kazuo Mori Trainee Award, <i>Society for Applied Research on Memory & Cognition</i>	2019
Charles Lafitte Foundation Travel Awards, <i>Duke University</i>	2018, 2019
Governor General's Academic Medal, <i>Government of Canada, University of Toronto</i> National award granted to the highest-performing undergraduate student.	2018
John Black Aird Scholarship, <i>University of Toronto</i> Awarded to the top student of the tri-campus graduating class (18,500 students).	2018
Rose Sheinin Award, <i>University of Toronto</i> Awarded for exemplary academic achievement by a woman in science.	2018
Women's Centenary Silver Medal, <i>Victoria College, University of Toronto</i>	2018
Treble & Barber Graduate Studies Scholarship, <i>Victoria College, University of Toronto</i>	2018
Dean's List Scholar, <i>University of Toronto</i>	2014–18
Outstanding Poster Presentation, <i>NeuroXchange Conference</i>	2017
Moscovitch Award, <i>Toronto Area Memory Group Conference</i>	2017
James Mark Baldwin Prize for Best Essay, <i>University of Toronto</i>	2017
University of Toronto Scholars Award, <i>University of Toronto</i>	2014–2018
Academic Merit Scholarships, <i>University of Toronto, Victoria College</i>	2014–2018

Invited Colloquia & Seminars

- Sinclair, A.H. (2025, May). Psychological interventions change beliefs and intentions about everyday health risks. *Rutgers University - Camden, Department of Psychology.*
- Sinclair, A.H. (2025, February). Cognitive interventions for real-world challenges. *Rice University, Department of Psychological Sciences.*
- Sinclair, A.H. (2025, February). Applied cognitive neuroscience: Updating memories, beliefs, and behaviors. *Boston University, Department of Psychological & Brain Sciences.*
- Sinclair, A.H. (2025, January). Shaping the affective context of cognition. *Stanford University, Department of Psychology.*
- Sinclair, A.H. (2025, January). Cognitive interventions for real-world challenges. *University of California - San Diego, Department of Cognitive Science.*
- Sinclair, A.H. (2024, December). Minds, brains, and mass media: Interventions for real-world challenges. *University of Michigan, Department of Communication & Media.*
- Sinclair, A.H. (2024, November). Psychological interventions to motivate preventative health behaviors. *University of Maryland, Workshop on Disease Dynamics and Human Behavior.*
- Sinclair, A.H. (2024, March). Cognitive interventions for real-world challenges. *Emory University, Department of Psychology.*

Invited Colloquia & Seminars (continued)

Sinclair, A.H. (2024, March). Lab and field experiments for communicating viral exposure risk. *University of Maryland, Pandemic Readiness Initiative.*

Sinclair, A.H. (2024, January). Cognitive interventions for real-world challenges. *Princeton University, Department of Psychology.*

Sinclair, A.H. (2023, Dec). Motivational states bias learning and memory. *University of Pennsylvania, Department of Psychology.*

Sinclair, A.H. (2023, October). Lab and real-world interventions for communicating health risks. *Rutgers University – Camden, Department of Psychology, Prevention Science Program.*

Sinclair, A.H. (2022, Feb). Lab and real-world interventions to correct pandemic risk perception. *Duke University, Duke Institute for Brain Sciences.*

Conference Talks

Sinclair, A.H., Cosme, D., Carreras-Tartak, J., Lydic, K., & Falk, E.B. (2025, June). Imagining the future motivates action to address climate change. Talk, *International Communication Association, Denver, CO.*

Sinclair, A.H., Cosme, D., Carreras-Tartak, J., & Falk, E.B. (2025, June). Emotional framing of news headlines influences engagement, donations, and memory. Talk, *International Communication Association, Denver, CO.*

Sinclair, A.H., Cosme, D., Lydic, K., Reinero, D.A., Carreras-Tartak, J., Mann, M., & Falk, E.B. (2024, November). Behavioral interventions motivate action to address climate change. Talk, *Psychonomic Society, New York, NY.*

Sinclair, A.H., Falk, E.B., Goodman, A., & Chesnes, M. (2024, April). Crafting impactful environmental narratives: Leveraging communication science, visuals, and technology in storytelling. Workshop, *Society of Environmental Journalists, Philadelphia, PA.*

Sinclair, A.H., Wright, R., & Adcock, R.A. (2023, November). Reframing the value of errors mitigates anxiety-related learning deficits. Symposium talk, *Psychonomic Society, San Fran., CA.*

Sinclair, A.H., Taylor, M.K., & Samanez-Larkin, G.R. (2023, August). Scenario-based messages on social media motivate COVID-19 information seeking. Talk, *SARMAC, Nagoya, Japan.*

Sinclair, A.H., Wang, Y.C., & Adcock, R.A. (2023, Apr). Instructed motivational states bias reinforcement learning and memory formation. Symposium talk, *Learning & Memory, Huntington Beach, CA.*

Sinclair, A.H., Wang, Y.C., & Adcock, R.A. (2023, Mar). Instructed motivational states bias reinforcement learning and memory formation. Data blitz, *Cognitive Neuroscience Society, San Fran., CA.*

Sinclair, A.H., Hakimi, S., Stanley, M.S., Adcock, R.A., Samanez-Larkin, G.R. (2021, July). Pairing facts with imagined consequences improves pandemic-related risk perception. Talk, *SARMAC, virtual.*

Sinclair, A.H. & Barense, M.D. (2018, May). Prediction error influences episodic memory reconsolidation. Data blitz, *Toronto Area Memory Group Conference, Toronto, ON.*

Poster Presentations

- Sinclair, A.H.,** Cosme, D., Carreras-Tartak, J., & Falk, E.B. (2025, April). Affective framing of news headlines influences information consumption and memory. *Cognitive Neuroscience Society*.
- Sinclair, A.H.,** Wang, Y.C., & Adcock, R.A. (2024, Nov). Motivational states shape neural representations during reinforcement learning and memory formation. *Society for Neuroscience*.
- Sinclair, A.H.,** Cosme, D., Carreras-Tartak, J., Butler, T., Kostick, H., Mann, M., & Falk, E. (2024, April). Misperceptions of impact predict intentions to take action against climate change. *Cognitive Neuroscience Society*.
- Sinclair, A.H.,** Cosme, D., Carreras-Tartak, J., Butler, T., Kostick, H., Mann, M., & Falk, E. (2024, April). Cognitive and social factors shape intentions to take action against climate change. *Social and Affective Neuroscience Society*.
- Sinclair, A.H.,** Wang, Y.C., & Adcock, R.A. (2023, Nov). Neural correlates of motivational states that bias reinforcement learning and memory formation. *Society for Neuroscience*.
- Sinclair, A.H.,** Wang, Y.C., & Adcock, R.A. (2023, Mar). Instructed motivational states bias reinforcement learning and memory formation. *Cognitive Neuroscience Society*.
- Sinclair, A.H.,** Wang, Y.C., & Adcock, R.A. (2022, Nov). Early and late rewards bias value memory and preferences over distinct timescales. *Psychonomic Society*.
- Sinclair, A.H.,** Wang, Y.C., & Adcock, R.A. (2022, Apr). First impressions: Early rewards in episodes bias value memory and preferences. *Cognitive Neuroscience Society*.
- Sinclair, A.H.*,** Wright, R.*, Hsiung, A.*, Hakimi, S., & Adcock, R.A. (2022, Apr). Downside of doom scrolling: Pausing to reflect influences information seeking and enhances memory. *Cognitive Neuroscience Society*. *Denotes equal contribution.
- Sinclair, A.H.,** Hakimi, S., Stanley, M.S., Adcock, R.A., & Samanez-Larkin, G.R. (2020, October). Perceived vs. actual virus transmission risk during the COVID-19 pandemic. *Society for Neuroeconomics*.
- Sinclair, A.H.,** Hakimi, S., Adcock, R.A., & Barense, M. D. (2020, August). Effective connectivity among cortico-hippocampal regions predicts memory for naturalistic episodes. *Context and Episodic Memory Symposium*.
- Sinclair, A.H.,** Poh, J.H., Adcock, R.A., & Barense, M. D. (2020, May). Neural representations of emotional valence and intensity during naturalistic events. *Cognitive Neuroscience Society*.
- Sinclair, A.H.,** Manalili, G.M., & Adcock, R.A., & Barense, M. D. (2019, Nov). Surprising event boundaries modulate hippocampal activity & distort episodic memories. *Psychonomic Society*.
- Sinclair, A.H.,** Manalili, G.M., Adcock, R.A., & Barense, M. D. (2019, Oct). Prediction errors at event boundaries drive episodic memory reconsolidation. *Society for Neuroscience*.
- Sinclair, A.H.,** Manalili, G.M., & Barense, M.D. (2019, Apr). Neural mechanisms of prediction error and episodic memory distortion. *Smokies Cognition and Neuroscience Symposium*.
- Sinclair, A.H.,** Manalili, G.M., & Barense, M.D. (2017, Oct). Surprise and destabilize: Prediction error triggers episodic memory updating. *Society for Neuroscience*.

Teaching Experience

Course in College Teaching – Center for Excellence in Teaching, <i>University of Pennsylvania</i>	2024
Guest Lecturer – Cognitive Neuroscience Research Internship, <i>Duke University</i> Topics: <i>Cog Neuro Methods, Memory & Motivation, Reinforcement Learning</i>	2020-2023
Guest Lecturer – Duke Neuro Methods Workshops, <i>Duke University</i> Topics: <i>Mixed Effects Regression, Advanced Data Visualization</i>	2020-2021
Teaching Assistantships – Dep. of Psychology & Neuroscience, <i>Duke University</i> NEUROSCI101: Biological Bases of Behavior (<i>Profs. Karen Murphy & Minna Ng</i>) PSY444: Neuroscience Service Learning (<i>Prof. Minna Ng</i>)	2020, 2021 2021
Teaching Assistantship – Victoria College, <i>University of Toronto</i> VIC171: Method, Theory, & Practices in Natural Sciences (<i>Prof. Brian Baigrie</i>)	2017-2018
Tutor for University & High School Students – Independent, <i>Toronto, ON</i>	2016-2018

Mentoring

Graduate Students: Christian Benitez* (2023–present), Thandi Lyew* (2023–present), Chico Xu (2024–present), Taurean Butler* (2023–2024), Hannah Schwalberg (2023–2024)

Honors Thesis Students: Alyssa Guthrie* (2020–2023), Yume Choi (2021–2022)

Undergraduate Research Assistants: Paul Kim* (2020–2022), Tolulemi Gbile* (2018–2020), Grace Manalili* (2017–2019), Carolyn Chung (2017–2018), Kayla Liu (2018)

Cognitive Neuro Research Interns: Paige Sevchik*, Nour Kanan*, Blaine Luebbering*, Dipali Arora*

* individuals who identify with groups that are underrepresented or historically disadvantaged in STEM

Service

Nominated Representative – <i>Graduate Student Affairs, Duke University</i> Student Liaison to the Graduate School, representing Cognitive Neuroscience.	2019-2023
Departmental Event Planner – <i>Center for Cognitive Neuroscience, Duke University</i> Contributed to planning the annual departmental retreat and solicited feedback from members of the department on culture, practices, and issues.	2021-2022
Journal Club Organizer – <i>Center for Cognitive Neuroscience, Duke University</i> Organized and managed a weekly journal club for trainees in the Center.	2019-2020
Volunteer Editor – <i>The Inkblot: Undergraduate Journal of Psychology</i> Reviewed & edited papers from undergraduate psychology students.	2017-2018

Outreach

- Outreach Volunteer** — *University of Pennsylvania* 2023–2024
Mentored graduate school applicants from underrepresented groups through the [MindCORE DivE In](#) initiative at Penn. Moderated faculty panels, led workshops on writing and applying to graduate school, and mentored students.
- Outreach Lecturer** — *Duke University* 2023
Lectured on learning strategies and mental health as part of an NIH-funded outreach program for high-school students from underrepresented groups.
- Program Coordinator & Mentor** — *Cognitive Neuroscience Research Internship* 2020–2023
Contributed to founding and leading a [research internship program](#) that provides equitable and accessible research opportunities for undergraduate students from historically underrepresented backgrounds. Lectured, mentored, administrated, and obtained funding.
- Service-Learning Facilitator** — *Neuroscience Service-Learning Course, Duke University* 2021
Contributed to developing a service-learning course and forging community partnerships. Oversaw the design, production, and donation of educational neuroscience activity kits for children in underserved neighborhoods.
- Mentor** — *Científico Latino: Graduate School Mentorship Initiative* 2019–2022
Guided STEM graduate school applicants from underrepresented minorities. Revised graduate and NSF-GRFP applications, conducted mock interviews.

Selected Press

For an expanded list of press coverage, see <https://alyssasinclair.com//press/>

Penn Today (2025): [What Behavioral Strategies Motivate Environmental Action?](#)

A collaborative study tested 17 strategies in an “intervention tournament.”

Duke Today (2024): [Yet Another Reason Why You Should Sleep on it Before Making an Important Decision](#)

Science proves, once again, that we are easily deceived by first impressions.

MedPage Today (2023): [Why Aren't People Getting the Bivalent COVID Booster?](#)

Survey shows lack of awareness on eligibility, availability, and some just think they're immune.

Duke Today (2023): [This One Simple Brain Hack Might Boost Learning and Improve Mental Health](#)

A simple shift from a high-pressure mindset to a curious one improves people's memory.

Big Think (2022): [How Trying to Predict the Future can Transform Your Memories](#)

Whenever you're surprised, there's a good chance that your brain is busy tweaking your memories.

Nature News & Views (2021): [Risks, Real and Imagined](#)

A new study finds that imagining a personalized disease transmission event amplifies perceived risk and bolsters risk-related information seeking in older age.

Peer Reviewing

Nature Human Behaviour	Learning & Memory	Frontiers in Psychology
Psychological Science	Cognition	Frontiers in Public Health
Current Biology	Learning & Motivation	Open Mind: Discoveries in Cog. Sci.
NeuroImage	Memory & Cognition	Philosophical Transactions of the Royal Society B
npj Science of Learning	Neuropsychologia	Journal of Applied Research in Memory and Cognition
Journal of Cognitive Neuro. Memory	Personality Science	
	WIREs Cognitive Science	

Skills

- fMRI data collection & analysis (FSL, fMRIPrep, SPM, bash)
- Data analysis with R & Python, multilevel modeling
- Computational modeling (reinforcement learning, large language models)
- Experiment programming with Python and Javascript (Qualtrics, Psychopy, Pavlovia)
- Data visualization with R and Adobe Illustrator

References

Emily Falk, PhD

Professor, *University of Pennsylvania*

R. Alison Adcock, MD/PhD

Associate Professor, *Duke University*

Gregory R. Samanez-Larkin, PhD

Jerry and Patricia Crawford Hubbard Professor, *Duke University*

Morgan D. Barense, PhD

Professor & Canada Research Chair, *University of Toronto*

Affiliations

- Cognitive Neuroscience Society
- Society for Applied Research in Memory & Cognition
- Psychonomic Society
- Society for Neuroscience
- Social and Affective Neuroscience Society
- International Communication Association

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Postdoctoral advisor, 2023-Present

alison.adcock@duke.edu

Graduate co-advisor, 2018-23

g.samanezlarkin@duke.edu

Graduate co-advisor, 2018-23

morgan.barense@utoronto.ca

Thesis advisor & collaborator, 2014-21