

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; Annenberg Public Policy Center;
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

Preprints

- Lydic, K., Sinclair, A.H., Cosme, D., Carreras-Tartak, J., & Falk, E.B. (2025). [Action planning interventions to promote individual and collective climate action.](#)
- Sinclair, A.H., Cosme, D., Carreras-Tartak, J., & Falk, E.B. (2025). [Affective framing of environmental news headlines influences engagement, donations, and memory.](#)
- Sinclair, A.H., Taylor, M., Beckett, S., Weitz, J., & Samanez-Larkin, G.R. (2024). [Personalized feedback about immunity corrects risk misestimation and motivates vaccination.](#)
- Sinclair, A.H., Hsiung, A., Wright, R., Hakimi, S., & Adcock, R.A. (2024). [Pausing to reflect during news consumption counteracts negativity biases in memory.](#)

Publications (in order of recency)

1. Sinclair, A.H., Harris, M., Andris, C., Cosme, D., Peters, E., Fagerlin, A., Falk, E.B., & Weitz, J.S. (2025). [NIH indirect cost cuts will affect the economy and employment](#). *Nature Human Behav.*
2. Sinclair, A.H., Cosme, D., Lydic, K., Reinero, D.A., Carreras-Tartak, J., Mann, M., & Falk, E.B. (2025). [Behavioral interventions motivate action to address climate change](#). *PNAS*, 122(20).
3. 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).
4. 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).
5. 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
6. Sinclair, A.H. *, Wang, Y.C. *, & Adcock, R.A. (2023). [Instructed motivational states bias reinforcement learning and memory formation](#). *PNAS*, 120(31). * equal contribution
7. 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).
8. 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*.
9. 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).
10. 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](#). *PNAS*, 118(51).
11. 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](#). *PNAS*, 118(32).
12. 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.
13. 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.
14. Stanley, M.L., Sinclair, A.H., & Seli, P. (2020). [Intellectual humility and perceptions of political opponents](#). *Journal of Personality*, 88(6), 1-21.

Publications (continued)

15. Sinclair, A.H. & Barense, M.D. (2019). [Prediction error and memory reactivation: How incomplete reminders drive reconsolidation](#). *Trends in Neurosciences*, 42(10), 728-740.
16. Sinclair, A.H. & Barense, M.D. (2018). [Surprise and destabilize: Prediction error influences episodic memory reconsolidation](#). *Learning & Memory*, 25(8), 369-381.

Fellowships

Joan Bossert Postdoctoral Research Fellowship, <i>University of Pennsylvania</i>	2023–26
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 (Declined)	2018
NSERC Undergraduate Student Research Award, <i>University of Toronto</i>	2018

Grants

MindCORE Neuroimaging Pilot Grant Co-PIs: A. Sinclair, E. Falk	2025
Title: "Affective Framing of Information Engages Neural Systems for Motivation"	\$6,300
Funding Agency: University of Pennsylvania	
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, Co-I: A. Sinclair	2021–23
Title: "Modeling SARS-CoV-2 Risk, Interventions, and Impacts on Healthcare"	\$600,000
Funding Agency: Centers for Disease Control and Prevention (CDC)	
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 (Profs. Karen Murphy & Minna Ng) PSY444: Neuroscience Service Learning (Prof. Minna Ng)	2020, 2021 2021
Teaching Assistantship — Victoria College, <i>University of Toronto</i> VIC171: Method, Theory, & Practices in Natural Sciences (Prof. Brian Baigrie)	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

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	Quarterly Journal of Experimental Psychology
Journal of Cognitive Neuro. Memory	Personality Science	WIREs Cognitive Science
Oxford University Press	Journal of Applied Research in Memory and Cognition	

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, Pavlovio)
- Data visualization with **R** and **Adobe Illustrator**

Affiliations

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

References

Emily Falk, PhD

Professor, *University of Pennsylvania*

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Postdoctoral advisor, 2023-Present

R. Alison Adcock, MD/PhD

Associate Professor, *Duke University*

alison.adcock@duke.edu

Graduate co-advisor, 2018-23

Gregory R. Samanez-Larkin, PhD

Jerry and Patricia Crawford Hubbard Professor, *Duke University*

g.samanezlarkin@duke.edu

Graduate co-advisor, 2018-23

Morgan D. Barense, PhD

Professor & Canada Research Chair, *University of Toronto*

morgan.barense@utoronto.ca

Thesis advisor & collaborator, 2014-21