

ALYSSA H. SINCLAIR

| Curriculum Vitae

Duke University, Center for Cognitive Neuroscience, Durham, NC

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ORCID 0000-0003-0447-3959

Research Interests: *Prediction error, episodic memory, belief updating, hippocampus, reconsolidation*

Education

Ph.D., Duke University — Psychology & Neuroscience, Cognitive Neuroscience 2018 – 2023

Advisors: Dr. R. Alison Adcock & Dr. Gregory R. Samanez-Larkin

(anticipated)

Cumulative GPA: 4.0

B.Sc. with High Distinction, University of Toronto — Psychology, Research Specialist 2014 – 2018

Valedictorian, recipient of the Governor General's Academic Medal

Cumulative GPA: 4.0

Honors Thesis: *Prediction Error Influences Episodic Memory Reconsolidation*

Advisors: Dr. Morgan Barense & Dr. William Cunningham

Publications

Sinclair, A. H., Brunec, I. K., Manalili, G. M., Adcock, R. A., & Barense, M. D. (2020). Prediction errors modulate hippocampal representations and update episodic memories. *BioRxiv*. DOI:

<https://doi.org/10.1101/2020.09.29.319418>

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*.

DOI: [10.31234/osf.io/94a7v](https://doi.org/10.31234/osf.io/94a7v)

Stanley, M.L., Sinclair, A.H., & Seli, P. (2020). Intellectual humility and perceptions of political opponents, *Journal of Personality*, 00, 1-21. DOI: [10.1111/jopy.12566](https://doi.org/10.1111/jopy.12566)

Sinclair, A. H. & Barense, M. D. (2019). Prediction error and memory reactivation: How incomplete reminders drive reconsolidation. *Trends in Neurosciences*, 42. DOI: [10.31234/osf.io/h8fy9](https://doi.org/10.31234/osf.io/h8fy9)

Sinclair, A. H. & Barense, M. D. (2018). Surprise and destabilize: Prediction error influences episodic memory reconsolidation. *Learning & Memory*, 25(8), 369-381. DOI: [10.1016/j.tins.2019.08.007](https://doi.org/10.1016/j.tins.2019.08.007)

Manuscripts in Preparation

Sinclair, A.H.*, Hakimi, S.*, Stanley, M.S., Adcock, R.A., & Samanez-Larkin, G.R. (2020). An intervention to improve risk perception accuracy during the COVID-19 pandemic.

Fellowships & Research Grants

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|---|---------------------|
| NSF Graduate Research Fellowship, <i>National Science Foundation</i> | \$138,000, 2019–23 |
| Postgraduate Scholarship, <i>Natural Sci. and Eng. Research Council of Canada</i> | \$63,000, 2019–21 |
| Special Topics COVID-19 Research Grant, <i>Duke University</i> | \$2,500, 2020 |
| Research Germinator Award, <i>Duke Institute for Brain Sciences</i> | \$25,000, 2019–20 |
| James B. Duke Graduate Fellowship, <i>Duke University</i> | \$20,000, 2018–2021 |
| NSERC Canada Graduate Scholarship- Master's (<i>Declined</i>) | \$17,500, 2018 |
| NSERC Undergraduate Student Research Award, <i>University of Toronto</i> | \$5,625, 2018 |
| Undergraduate Research Grant, <i>University of Toronto</i> | \$1,500, 2018 |
| George Mandler Research Fund, <i>University of Toronto</i> | \$550, 2018 |

Awards & Honors

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| Trainee Professional Development Award, <i>Society for Neuroscience</i> | 2019 |
| SARMAC 2019 Travel 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> | 2018 |
| National award granted to the highest-performing undergraduate student. | |
| John Black Aird Scholarship, <i>University of Toronto</i> | 2018 |
| Awarded to the top student of the tri-campus graduating class. | |
| Rose Sheinin Award, <i>University of Toronto</i> | 2018 |
| Awarded for academic excellence in an undergraduate science program. | |
| Women's Centenary Silver Medal, <i>Victoria College, University of Toronto</i> | 2018 |
| Treble & Barber Travelling Scholarship, <i>Victoria College, University of Toronto</i> | 2018 |
| Dean's List Scholar, <i>University of Toronto</i> | 2014–18 |
| James Mark Baldwin Prize for Best Essay, <i>University of Toronto</i> | 2017 |
| Moscovitch Award for Outstanding Contribution to Discussion, <i>TAMeG Conference</i> | 2017 |
| Outstanding Poster Presentation, <i>NeuroXchange Conference</i> | 2017 |
| University of Toronto Scholars Award, <i>University of Toronto</i> | 2014–17 |
| Academic Merit Scholarships, <i>Victoria College, University of Toronto</i> | 2014–17 |

Conference Talks

- Barense, M.D. & **Sinclair, A.H.** (2020, May). Past meets present: Prediction error drives episodic memory updating. *Cognitive Neuroscience Society*, Virtual Conference.
- Sinclair, A.H.**, Manalili, G.M., & Barense, M.D. (2019, June). Surprise drives episodic memory updating and distortion. *Society for Applied Research on Memory and Cognition*, Cape Cod, MA.
- Sinclair, A.H.** & Barense, M.D. (2018, May). Prediction error influences episodic memory reconsolidation. *Toronto Area Memory Group Conference*, Toronto, ON.
- Sinclair, A.H.** & Barense, M.D. (2018, May). Prediction error influences episodic memory reconsolidation. *Undergraduate Thesis Conference*, Toronto, ON. ***Awarded Notable Presentation.**
- Sinclair, A.H.** & Barense, M.D. (2018, April). Surprise and destabilize: Prediction error influences episodic memory reconsolidation. *NeuroXchange Conference*, Hamilton, ON.

Poster Presentations

- 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*, Virtual Conference.
- 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*, Virtual Conference.
- 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*, Virtual Conference.
- Sinclair, A.H.**, Manalili, G.M., & Barense, M. D. (2019, Nov). Surprising event boundaries modulate hippocampal activity and distort episodic memories. *Psychonomic Society*, Montreal, QC.
- Sinclair, A.H.**, Manalili, G.M., & Barense, M. D. (2019, Oct). Prediction errors at event boundaries drive episodic memory reconsolidation. *Society for Neuroscience*, Chicago, IL. ***Trainee Prof. Dev. Award**
- 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*, Asheville, NC.
- Sinclair, A.H.**, Manalili, G.M., & Barense, M.D. (2019, Mar). Neural mechanisms of episodic memory reconsolidation: A critical role for prediction error. *Cognitive Neuroscience Society*, San Fran., CA.
- Sinclair, A.H.** & Barense, M. D. (2017, Nov). Surprise and destabilize: Prediction error triggers episodic memory updating. *Society for Neuroscience*, Washington, D.C.
- Sinclair, A.H.** & Barense, M. D. (2017, Apr). Prediction errors in episodic memory reconsolidation. *NeuroXchange Conference*, McMaster University, Hamilton, ON. ***Outstanding Poster Award.**

Teaching Experience

Teaching Assistantships — Duke University

PSY340: Educational Neuroscience (Dr. Minna Ng) 2021

NEUROSCI101: Biological Bases of Behavior (Drs. Karen Murphy & Minna Ng) 2020

Teaching Assistantship — University of Toronto

VIC171: Method, Theory, & Practices in Natural Sciences (Dr. Brian Baigrie) 2017-2018

Independent Tutor for University and High School Students — Toronto, ON 2016-2018

Skills

- fMRI Data Collection & Analysis (FSL, SPM)
- Computational Neuroscience (NeuroHackademy 2020)
- Transcranial Magnetic Stimulation Certification
- Programming & Statistical Analysis with R, Python, Bash, MATLAB, SPSS, EyeLink

Affiliations

- Society for Neuroscience
- Cognitive Neuroscience Society
- Society for Applied Research in Memory and Cognition
- Society for Neuroeconomics

Service & Outreach

Ad Hoc Reviewer — *Psychological Science, Learning & Memory, Learning & Motivation, Memory & Cognition, WIREs Cognitive Science*

Nominated Representative — *Graduate Student Affairs, Duke University* 2019-Present
Graduate Student Liaison representing the Cognitive Neuroscience Program.

Project Coordinator & Mentor — *Motivation & Decision Sciences Research Internship* 2020-Present
Helped develop and lead a research internship program that prioritized outreach to first-generation and underrepresented students without prior research experience. Lectured, mentored, and performed administration.

Mentor — *Científico Latino: Graduate School Mentorship Initiative* 2019-2021
Guiding STEM graduate school applicants from underrepresented minorities.
Revised graduate and NSF-GRFP applications, conducted mock interviews.

Volunteer Editor — *The Inkblot: Undergraduate Journal of Psychology* 2017-2018
Reviewed & edited papers from undergraduate psychology students.

Let's Talk Science Challenge — *University of Toronto* 2017
Outreach poster fair, communicating neuroscience to middle school students.

References

Dr. R. Alison Adcock, *Duke University* alison.adcock@duke.edu

Dr. Morgan D. Barense, *University of Toronto* morgan.barense@utoronto.ca

Dr. Gregory Samanez-Larkin, *Duke University* g.samanezlarkin@duke.edu

Dr. William Cunningham, *University of Toronto* cunningham@psych.utoronto.ca