Natalie DiProspero **Curriculum Vitae**

CONTACT INFORMATION

Website: https://nataliediprospero.com Twitter X: @natdiprospero
LinkedIn: https://www.linkedin.com/in/nataliediprospero/

EDUCATION

PhD in Biological Sciences Aug 2020 - Oct 2023
Department of Neurobiology and Behavior
University of California, Irvine; Irvine, CA

M.S. in Biological Sciences Sept 2017 - Aug 2020
Department of Neurobiology and Behavior
University of California, Irvine; Irvine, CA

B.A. in Philosophy-Neuroscience-Psychology and French Aug 2011 - May 2015
Washington University in St. Louis; St. Louis, MO

Semester abroad program in Psychology and Philosophy Sept 2013 - Dec 2013
University of Edinburgh; Edinburgh, UK

RESEARCH EXPERIENCE

Postdoctoral Research Fellow Nov 2023 - Feb 2024
Yassa Translational Neurobiology Laboratory
University of California, Irvine; Irvine, CA
Principal Investigator: Michael A. Yassa, PhD

Graduate Research Fellow Apr 2018 - Oct 2023
Yassa Translational Neurobiology Laboratory
University of California, Irvine; Irvine, CA
Principal Investigator: Michael A. Yassa, PhD

Technical Intramural Research Training Award Fellow June 2015 - June 2017
Laboratory of Behavioral Neuroscience
National Institute on Aging; Baltimore, MD
Principal Investigator: Susan M. Resnick, PhD

Research Assistant Jan 2014 - May 2015
Research Laboratory for Neural Basis of Cognitive Aging
Washington University in St. Louis; St. Louis, MO
Principal Investigator: Denise Head, PhD

Research Assistant May 2013 - Aug 2013
Neuroscience of Memory in Aging and Dementia Laboratory
Johns Hopkins University; Baltimore, MD
Principal Investigator: Michael A. Yassa, PhD

Research Assistant June 2012 - May 2013
Memory and Complex Learning Laboratory
Washington University in St. Louis; St. Louis, MO
Principal Investigator: Mark A. McDaniel, PhD

TEACHING EXPERIENCE

Teaching Assistant — Jan 2020 - Mar 2020
Course Title: “Human Neuropsychology”
University of California, Irvine; Irvine, CA
Instructor: Michael A. Yassa, PhD

Teaching Assistant — Apr 2019 - June 2019
Course Title: “Neurobiology and Behavior Laboratory”
University of California, Irvine; Irvine, CA
Instructor: Audrey C. Lew, PhD

Teaching Assistant — Jan 2019 - Mar 2019
Course Title: “Advanced Neurobiology II”
University of California, Irvine; Irvine, CA
Instructor: Georg F. Striedter, PhD

SCIENCE COMMUNICATION EXPERIENCE

Writer — Nov 2021 - Apr 2022
The Loh Down on Science Podcast
National Public Radio

Program Co-Chair — May 2019 - Nov 2021
K-12 Outreach Chair — May 2018 - May 2019
Founding Member — Oct 2017 - Mar 2022
Ambassador Program, Center for the Neurobiology of Learning and Memory
University of California, Irvine; Irvine, CA

K-12 Outreach Mentor — Sept 2011 - May 2013
Synapse Neuroscience Interest Group
Washington University in St. Louis; St. Louis, MO

SCIENCE COMMUNICATION COURSES

Activate to Captivate Workshop with Bri McWhorter — Jan 2022 - Mar 2022
University of California, Irvine; Irvine, CA

Science Policy and Advocacy for STEM Scientists Course — June 2020 - Oct 2020
University of California, Irvine; Irvine, CA

Communication Skills for Academics Course with Sandra Tsing Loh — Jan 2020 - Mar 2020
University of California, Irvine; Irvine, CA

AWARDS AND HONORS

Trainee Professional Development Award — Oct 2021
Society for Neuroscience

Director’s Excellence Award ($1,000) — May 2021
Center for the Neurobiology of Learning and Memory
University of California, Irvine; Irvine, CA

NIA T32 Grant in the Neurobiology of Aging and Alzheimer's Disease ($32,000/year stipend) — Aug 2019 - July 2021
Institute for Memory Impairments and Neurological Disorders
University of California, Irvine; Irvine, CA

Jared M. Roberts Memorial Graduate Student Travel Award ($1,000) — May 2019
Center for the Neurobiology of Learning and Memory
University of California, Irvine; Irvine, CA

Outstanding Poster Award, Postbac Poster Day — May 2017
National Institutes of Health; Bethesda, MD

NIA Scientific Director's Award, NIA Scientific Retreat — Mar 2017
National Institute on Aging; Baltimore, MD

Outstanding Poster Award, Postbac Poster Day — Apr 2016
National Institutes of Health; Bethesda, MD

College Honors — May 2015
Washington University in St. Louis; St. Louis, MO

Summer Undergraduate Research Award — May 2012
Washington University in St. Louis; St. Louis, MO

Dean's List — Dec 2011 - Dec 2014
Washington University in St. Louis; St. Louis, MO

PROFESSIONAL MEMBERSHIPS

Member, Alzheimer's Association ISTAART — Apr 2019 - June 2023
Member, Society for Neuroscience — May 2018 - Dec 2022

PUBLICATIONS

DiProspero ND, Sathishkumar M, Janecek J, Smith A, McMillan L, Peterson M, Phelan M, Tustison N, Keator DB, Doran E, Hom C, Nguyen D, Andrews H, Krinsky-McHale S, Brickman AM, Rosas HD, Lai F, Head E, Mapstone M, Schupf N, Silverman W, Lott IT, O'Bryant S, Yassa MA. Neurofilament light chain concentration mediates the association between regional medial temporal lobe structure and memory in adults with Down syndrome. *Alzheimers Dement (Amst)*. 2024;16(1):e12542. doi: 10.1002/dad2.12542.

DiProspero ND, Keator DB, Phelan M, van Erp TGM, Doran E, Powell DK, Van Pelt KL, Schmitt FA, Head E, Lott IT, Yassa MA. Selective impairment of long-range default mode network functional connectivity as a biomarker for preclinical Alzheimer's disease in people with Down syndrome. *J Alzheimers Dis*. 2022;85(1):153-65. doi: 10.3233/JAD-210572.

DiProspero ND, Kim S, Yassa, M. Magnetic resonance imaging biomarkers for cognitive decline in Down syndrome. In: Head E, Lott I, editors. The neurobiology of aging and Alzheimer disease in Down syndrome. 1st ed. Cambridge (MA): Elsevier Academic Press; 2021. p. 149-172.

Reagh ZM, Roberts JM, Ly M, **DiProspero N**, Murray E, Yassa MA. Spatial discrimination deficits as a function of mnemonic interference in aged adults with and without memory impairment. *Hippocampus*. 2014;24(3):303-14. doi: 10.1002/hipo.22224.

INVITED TALKS

DiProspero ND, Queder N, Taylor L, Sathishkumar M, McMillan L, Keator DB, Doran E, Hom C, Nguyen D, Andrews H, Krinsky-McHale S, Head E, Mapstone M, Brickman AM, Rosas HD, Lai F, Silverman W, Schupf N, Lott IT, Yassa MA. Medial temporal lobe functional connectivity, episodic memory, and tau accumulation in individuals with Down syndrome. Symposium presented at: International Conference on Learning and Memory; 2023 Apr 26-30; Huntington Beach, CA.

DiProspero ND, Sathishkumar M, McMillan L, Keator DB, Doran E, Hom C, Nguyen D, Rosas HD, Lai F, Brickman AM, Schupf N, Silverman W, Lott IT, Yassa MA. Functional connectivity in medial temporal lobe and default mode network changes with Alzheimer's disease progression in individuals with Down syndrome. Talk presented at: Trisomy 21 Research Society International Conference; 2022 June 9-12; Long Beach, CA.

DiProspero ND, Doran E, Lott IT, Yassa MA. Intrinsic brain network functional connectivity in default mode network during progression of Alzheimer's disease in Down syndrome. Talk presented at: Trisomy 21 Research Society Virtual Conference; 2021 June 8-10.

DiProspero ND, Yassa MA. Lower long-range default mode network connectivity predicts conversion to Alzheimer's disease in older individuals with Down syndrome. Talk presented at: 10th Annual REMIND Emerging Scientists Symposium; 2019 Feb 11; Irvine, CA.

POSTER PRESENTATIONS

DiProspero ND, Lingad JN, Chappel-Farley MG, Henningfield CM, Yassa MO. Building a sustainable model of neuroscience education and community outreach. Poster presented at: Annual Meeting of the Society for Neuroscience; 2022 Nov 12-16; San Diego, CA.

DiProspero ND, Sathishkumar M, McMillan L, Keator DB, Doran E, Hom C, Nguyen D, Rosas HD, Lai F, Brickman AM, Schupf N, Silverman W, Lott IT, Yassa MA. Default mode network and medial temporal lobe functional connectivity changes with Alzheimer's disease severity and cognitive impairment in individuals with Down syndrome. Poster presented at: Alzheimer's Association International Conference; 2022 July 31-Aug 4; San Diego, CA.

DiProspero ND, Sathishkumar M, McMillan L, Keator DB, Doran E, Hom C, Nguyen D, Rosas HD, Lai F, Brickman AM, Schupf N, Silverman W, Lott IT, Yassa MA. Functional connectivity in medial temporal lobe and default mode network changes with Alzheimer's disease progression in individuals with Down syndrome. Poster presented at: Trisomy 21 Research Society International Conference; 2022 June 9-12; Long Beach, CA.

DiProspero ND, Keator DB, Phelan M, van Erp TGM, Doran E, Lott IT, Yassa MA**.** Static and dynamic intrinsic brain network functional connectivity during progression of Alzheimer's disease in Down syndrome. Poster presented at: 12th Annual REMIND Emerging Scientists Symposium; 2021 Mar 18; Irvine, CA.

DiProspero ND, Keator DB, van Erp TGM, Doran E, Lott IT, Yassa MA. Reduced long-range default mode network connectivity predicts conversion to Alzheimer's disease in older individuals with Down syndrome. Poster presented at: 11th Annual REMIND Emerging Scientists Symposium; 2020 Feb 21; Irvine, CA.

DiProspero ND, Keator DB, van Erp TGM, Doran E, Lott IT, Yassa MA. Reduced long-range default mode network connectivity predicts conversion to Alzheimer's disease in older individuals with Down syndrome. Poster presented at: Annual Meeting of the Society for Neuroscience; 2019 Oct 19-23; Chicago, IL.

DiProspero ND, Keator DB, van Erp TGM, Doran E, Lott IT, Yassa MA. Reduced long-range default mode connectivity predicts conversion to Alzheimer's disease in older individuals with Down syndrome. Poster presented at: Alzheimer's Association International Conference; 2019 July 14-18; Los Angeles, CA.

DiProspero ND, Keator DB, van Erp TGM, Doran E, Lott IT, Yassa MA. Lower long-range default mode network connectivity predicts conversion to Alzheimer's disease in older individuals with Down syndrome. Poster presented at: 10th Annual REMIND Emerging Scientists Symposium; 2019 Feb 11; Irvine, CA.

DiProspero ND, Sathishkumar MT, Keator DB, van Erp TGM, McMillan L, Smith AP, Larson MS, Doran E, Lott IT, Yassa MA. Functional connectivity in a Down syndrome model of preclinical Alzheimer's disease. Poster presented at: Annual Meeting of the Society for Neuroscience; 2018 Nov 3-7; San Diego, CA.

DiProspero ND, Beason-Held L, An Y, Shafer A, Gomez G, Pacheco J, Resnick SM. Metabolic syndrome and cortical thinning in older adults. Poster presented at: NIA Scientific Retreat; 2017 Mar 2-3; Baltimore, MD; and NIH Postbac Poster Day; 2017 May 4; Bethesda, MD.

DiProspero ND, Pacheco J, An Y, Kitner-Triolo M, Resnick SM. Cortical thinning: Associations with age, sex, and cognitive status. Poster presented at: NIH Postbac Poster Day; 2016 Apr 20; Bethesda, MD.

DiProspero ND, Meyer A, McDaniel M. Keeping our brains in shape: The exploration of the relationship between aerobic exercise, cognitive training, and cognitive decline. Poster presented at: Washington University Undergraduate Research Symposium; 2012 Oct 27; St. Louis, MO.