

ANA MARIE DAUGHERTY, Ph.D.

Curriculum vitae

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EDUCATION

- 2014 Ph.D., Psychology (Behavioral and Cognitive Neuroscience)
Wayne State University, Detroit, MI
- 2011 M.A., Psychology (Behavioral and Cognitive Neuroscience)
Wayne State University, Detroit, MI
- 2007 B.S., Neuroscience and Experimental Psychology
Westmont College, Santa Barbara, CA

APPOINTMENTS

- 2024 - present Associate Professor with Tenure, Department of Psychology and Institute of Gerontology
Wayne State University
- 2018 – present Affiliated Faculty, Translational Neuroscience Program
Wayne State University
- 2018 - 2024 Assistant Professor, Department of Psychology, Institute of Gerontology
Wayne State University
- 2015 - 2018 Beckman Post-doctorate Research Fellow (Competitive Fellowship)
Beckman Institute for Advanced Science and Technology
University of Illinois Urbana-Champaign
Faculty Mentors: Arthur Kramer, Ph.D.; Neal Cohen, Ph.D.
- 2014 - 2015 Post-doctorate Research Fellow
Cognitive Neuroscience of Aging Laboratory, Institute of Gerontology
Wayne State University
PI: Naftali Raz, Ph.D.

PROFESSIONAL DEVELOPMENT

- 2023-24 Member, Academic Leadership Academy, Division of Academic Affairs, Wayne State University
- 2021-24 Member, Leaders Initiative, Michigan Alzheimer's Disease Research Center
- 2020-21 Leader, Faculty Learning Community, Office for Teaching and Learning, Wayne State University
"Student Success Through Evidence-Based Pedagogies (WSU-SSTEP)" / DUE-1524878
Agency: National Science Foundation (NSF); Stipend: \$5,000
- 2019-20 Member, Faculty Learning Community, Office for Teaching and Learning, Wayne State University
"Student Success Through Evidence-Based Pedagogies (WSU-SSTEP)" / DUE-1524878
Agency: National Science Foundation (NSF); Stipend: \$3,000

GRANTS AND FELLOWSHIPS

External Research Grants*Active*

- 2023-25 “Brain iron-mediated effects of inflammation and mitochondrial metabolic dysfunction on cognitive aging” / A23019
 Institution: Wayne State University
 Role: PI
 Agency: Glenn Foundation – American Federation for Aging Research
 Total Award: \$150,000
- 2022-26 “A Harmonized Medial Temporal Lobe Subregion Segmentation Protocol: An Essential Element for Alzheimer’s Research” / R01 AG070592-01A1
 Institution: Wayne State University
 PI: L. Wang, Ph.D.
 Role: Site PI
 Agency: NIH (NIA)
 Total Award: \$3,639,271 (\$394,824 site subaward)
- 2021-26 “Michigan Alzheimer’s Disease Research Center” / 1-P30AG072931-01
 Institution: University of Michigan (Wayne State University, subaward)
 PI: H. Paulson, M.D., Ph.D.
 Role: Lead Research Education Component; Co-I Data Core & NeuroImaging Core
 Agency: NIH (NIA)
 Total Award: \$15,381,397
- 2023-27 “Metabolic and vascular risk as modifiers of the relationship between age-dependent changes in the brain and cognition”
 Institution: University of Geneva
 PI: Paolo Ghisletta
 Role: Project Partner (secondary analysis of Detroit Aging Brain Study data)
 Agency: Swiss National Science Foundation
 Total Award: \$291,581 (266,461 CHF)
- 2022-26 “Impact of Dietary Fructose and High Salt on Neurocardiovascular and Renal Function” / R01 HL 163844
 Institution: Wayne State University / John D. Dingell VA Medical Center
 PI: N. Rossi, M.D.
 Role: Co-I
 Agency: NIH (NIHLBI)
 Total Award: \$1,954,920
- 2022-25 (NCE) “Backward walking as a novel fall prediction tool for multiple sclerosis” / R21 HD 106133-01A1
 Institution: Wayne State University
 PI: N. Fritz, DPT, Ph.D.
 Role: Co-I
 Agency: NIH (NICHD)
 Total Award: \$423,500
- 2022-25 “TRAIN-BW: Feasibility, Acceptability and Impact of Backward Walking Training in Persons with MS”
 Institution: Wayne State University
 PI: N. Fritz, DPT, Ph.D.
 Role: Co-I
 Agency: National Multiple Sclerosis Society Research Grant
 Total Award: \$600,000

2022-26 “Development and validation of a balance outcome measure for Huntington’s disease (Balance-HD)” / Pilot Grant
 Institution: Wayne State University
 PI: N. Fritz, DPT, Ph.D.
 Role: Co-I
 Agency: TEVA Pharmaceutical Industries, Ltd
 Total Award: \$100,000

Completed

2016-24 “Neural Correlates and Modifiers of Cognitive Aging” / 5R01AG011230-21A1
 (NCE) Institution: Wayne State University
 Role: multi-PI (as of 6/17/2022)
 Agency: NIH (NIA)
 Total Award: \$3,608,744

2018-24 “Community-Based Approach to Early Identification of Transitions to Mild Cognitive
 (NCE) Impairment (MCI) and Alzheimer’s Disease (AD) in African Americans” / R01 AG054484
 Institution: Wayne State University
 PI: V. Kavcic, Ph.D.
 Role: Co-I
 Agency: NIH (NIA)
 Total Award: \$3,301,912

2021-23 “The role of IL-18 and excitatory/inhibitory imbalances of top-down/bottom-up processes
 (NCE) to food cues as a predictor of successful maintenance of weight loss.” / Pilot award
 Institution: Wayne State University
 PI: P. Burghardt, Ph.D.
 Role: Co-I
 Agency: Michigan Diabetes Research Center (MDRC; NIH P30-DK020572)
 Total Award: \$68,064

2020-22 “Brain Iron Accumulation as a Pathway of Hypertension-Related Risk for Alzheimer’s
 Disease and Related Dementia” / Pilot award
 Institution: Wayne State University
 Role: PI
 Agency: Michigan Alzheimer’s Disease Research Center
 Total Award: \$35,000

2021-22 “Backward Walking as a Novel Outcome Measure in Multiple Sclerosis” / Pilot award
 Institution: Wayne State University
 PI: N. Fritz, Ph.D., P.T., D.P.T., N.C.S.
 Role: Co-I
 Agency: The Consortium of Multiple Sclerosis Centers (CMSC)
 Total Award: \$40,000

2016-17 “Harmonized Hippocampal Subfield Segmentation Working Group”
 Institution: Rotman Research Institute, University of Toronto
 PI: R. Olsen, Ph.D.
 Role: Co-I
 Agency: Joint Programme—Neurodegenerative Disease Research
 Total Award: 50,000 €

- 2012-14 "The Role of Iron Accumulation in Brain and Cognitive Decline"
 Institution: Wayne State University
 Role: PI
 Agency: Blue Cross Blue Shield of Michigan Awards Program; 1893.SAP
 Total Award: \$3000

Internal Research Grants

- 2015-18 Beckman Institute Postdoctoral Independent Research Award
 Institution: University of Illinois at Urbana-Champaign
 Role: PI
 Agency: Arnold and Mabel Beckman Foundation
 Total Award: \$25,000
- 2016-17 "Neural and Cognitive Correlates of Age-Related Decline in Decision Making"
 Institution: University of Illinois at Urbana-Champaign
 Role: PI
 Agency: Beckman Institution
 Total Award: \$25,000
- 2016-18 "Microstructural Biomarkers of Neurodegeneration in Mild Traumatic Brain Injury"
 Institution: University of Illinois at Urbana-Champaign
 PI: A. Barbey, Ph.D.
 Role: Research team
 Agency: Carle Foundation Hospital
 Total Award: \$50,000

Significant Contributor to Funded Research

- 2022-24 "Changes in hippocampal microstructure and hippocampal-dependent memory accompanying hormonal fluctuation in naturally cycling women" / RMH127503
 Institution: University of Illinois, Urbana-Champaign
 PI: H. Schwarb, Ph.D.
 Role: Other significant contributor
 Agency: NIH (HCMF)
 Total Award: \$275,000
- 2018-20 "Developmental Variations in Corticostriatal Thalamocortical Circuits and their Relationship to Psychopathology" / R21MH118556
 Institution: Child Mind Institute (NY)
 PI: A. Nikolaidis, Ph.D.
 Role: Other significant contributor
 Agency: NIH (NIMH)
 Total Award: \$418,853

External Research Fellowship Stipend Awards

- 2015-18 Beckman Institute Postdoctoral Fellowship
 Agency: Arnold and Mabel Beckman Foundation
 Total Award: \$165,000
- 2009-12 Predoctoral Research Fellowship
 Agency: NIH awarded to Institute of Gerontology, T32 HS013819
 Total Award: \$110,000

External Funding for Education and Community Outreach

- 2020 “Coronavirus Task Force on Racial Disparities Rapid Response”
 Organization Awarded: United Way
 Role: Sub-contract, Site Lead Wayne State University
 Agency: State of Michigan (CARES Act)
 Total Sub-Award: \$2,100,000
- 2012 “Careers in Aging Seminar”
 Institution: Wayne State University
 Agency: Association for Gerontology in Higher Education
 Total Award: \$200

PUBLICATIONS**Peer-Reviewed Articles** (mentored author trainee name underlined)

- 2024 1. Canada KL, Riggins T, Ghetti S, Ofen N, **Daugherty AM**. 2024. A data integration method for new advances in development cognitive neuroscience. *Dev Cog Neurosci*.70: 101475. [Epub 2024 Nov 9]. doi: [10.1016/j.dcn.2024.101475](https://doi.org/10.1016/j.dcn.2024.101475)
2. Raz N, **Daugherty AM**, Khatib D, Dahle CL, Rajan U, Zajac-Benitez C, Stanley J. 2024. Mapping age differences in brain energy metabolites and metabolic markers of cellular membrane production and degradation with ³¹P Magnetic Resonance Spectroscopy. *Human Brain Mapping*. 45(14):e70039. [Epub 2024 Oct 11]. doi: [10.1002/hbm.70039](https://doi.org/10.1002/hbm.70039)
3. Canada KL*, Mazolum-Farzaghi N*, Radman G, Adams JN, Bakker A, Baumeister H, Berron D, Bocchetta M, Carr V, Dalton MA, de Flores R, Keresztes A, La Joie R, Mueller SG, Raz N, Santinu T, Shaw T, Stark CEL, Tran TT, Wang L, Wisse LEM, Wuestefeld A, Yushkevich PA, Olsen RK†, **Daugherty AM**†, on behalf of the Hippocampal Subfields Group. 2024. A (Sub)field guide to quality control in hippocampal subfield segmentation on high-resolution T₂-weighted MRI. *Human Brain Mapping*. 45(15):e70004. [Epub 2024 Oct 25]. doi: [10.1002/hbm.70004](https://doi.org/10.1002/hbm.70004). * Equal contribution as first author; † equal contribution as senior author.
4. VanNostrand M, Monaghan PG, **Daugherty AM**, Fritz NE. 2024. Study protocol of a randomized controlled trial comparing backward walking to forward walking training on balance in Multiple Sclerosis: The TRAIN-MS trial. *Contemporary Clinical Trials*. 144: 107621. [Epub 2024 Jul 5]. doi: [10.1016/j.cct.2024.107621](https://doi.org/10.1016/j.cct.2024.107621)
5. Arble EA, Steinert SW, Shankar S, Cerjanic A, Sutton BP, **Daugherty AM**. 2024. Ideational Slippage in Middle-Aged and Older Adults: A Preliminary MRI Study. *International Journal of Environmental Research and Public Health*. 21(6): 656. [Epub 2024 May 22]. doi: [10.3390/ijerph21060656](https://doi.org/10.3390/ijerph21060656).
6. Takla TN, Matsuda PN, Herring TE, **Daugherty AM**†, Fritz NE†. 2024. Motor and Non-Motor Factors of Concern about Falling and Fear of Falling in Multiple Sclerosis. *Journal of Neurologic Physical Therapy*. 48(4): 198-206. [Epub 2024 Sep 17]. doi: [10.1097/NPT.0000000000000490](https://doi.org/10.1097/NPT.0000000000000490) † Equal contribution as senior author.
7. Monaghan PG, Takla TN, Chargo AN, Edwards EM, Myers E, **Daugherty AM**†, Fritz NE†. 2024. Measurement properties of backward walking and its sensitivity and feasibility in predicting falls in persons with Multiple Sclerosis. *International Journal MS Care*.26:155-166. [Epub 2024 Jun 24]. doi: [10.7224/1537-2073.2023-091](https://doi.org/10.7224/1537-2073.2023-091) † Equal contribution as senior author.
8. Monaghan PG, **Daugherty AM**, Fritz NE. 2024. Establishing the reliability of the step test evaluation on stairs (STEPS) in Multiple Sclerosis. *Archives of Physical Medicine and*

- Rehabilitation. S0003-9993(24)00909-2. [Epub 2024 Apr 6]. [doi: 10.1016/j.apmr.2024.03.015](https://doi.org/10.1016/j.apmr.2024.03.015)
9. **Chargo AN**, **Takla TN**, Fritz NE[†], **Daugherty AM**[†]. 2024. On the move: Correlation of impaired mobility with spatial navigation ability in persons with Multiple Sclerosis. *Brain Sciences*. 14(3): 277. [Epub 2024 Mar 14]. [doi: 10.3390/brainsci14030277](https://doi.org/10.3390/brainsci14030277) [†] Equal contribution as senior author.
 10. Wuestefeld A, Baumeister H, Adams JN, de Flores R, Hodgetts C, Mazloun-Farzaghi N, Olsen R, Puliyadi V, Tran TT, Bakker A, **Canada K**, Dalton MA, **Daugherty AM**, La Joie R, Wang L, Bedard M, Buendia E, Denning A, Arroyo-Jimenez, M, Aratcho-Perula E, Irwin D, Ittyerah R, Lee E, Lim S, Marcos-Rabal P, Martin M, Munoz M, Prieto C, Schuck T, Trotman W, Bela A, Yushkevish P, Amunts K, Augustinack J, Ding S-L, Insausti R, Kedo O, Berron D, Wisse L. 2024. Comparison of histological delineations of medial temporal lobe cortices by four independent neuroanatomy laboratories. *Hippocampus*. 34(5): 241-260. [Epub 2024 Feb 28]. [doi: 10.1002/hipo.23602](https://doi.org/10.1002/hipo.23602)
 11. **Takla TN**, Matsuda PN, Herring TE, **Daugherty AM**, Fritz NE. 2024. Scale development to evaluate differences between concern about falling and fear of falling: the concern and fear of falling evaluation (CAFFE). *Frontiers in Psychology*. 15-2024. [Epub 2024 Jan 21]. [doi: 10.3389/fpsyg.2024.1336078](https://doi.org/10.3389/fpsyg.2024.1336078)
 12. Zhou J, Wearn A, Huck J, Hughes C, Garacchini G, Tremblay-Mercier J, Poirier J, Willeneuve S, Lucas Tardif C, Chakravarty MM, **Daugherty AM**, Gauthier CJ, Turner GR, Spreng RN, PREVENT-AD Research Group. Iron deposition and distribution across the hippocampus is associated with pattern separation and pattern completion in older adults at risk for Alzheimer's disease. *Journal of Neuroscience*. e1973232024. [Epub 2024 Feb 22]. [doi: 10.1523/JNEUROSCI.1973-23.2024](https://doi.org/10.1523/JNEUROSCI.1973-23.2024)
 - 2023 13. **Homayouni R**, **Canada KL**, **Saifullah S**, Foster D'J, Thill C, Raz N, **Daugherty AM**^{*}, Ofen N^{*}. 2023. Age-related differences in hippocampal subfield volumes across the human lifespan: A meta-analysis. *Hippocampus*. 33(12): 1292-1315. [doi: 10.1002/hippo.23582](https://doi.org/10.1002/hippo.23582) (^{*}co-senior author)
 14. **Daugherty AM**, **Canada KL**[†], **Chargo AN**[†], Knauft K[†], **Ryan CE**[†], Shay K[†]. 2023. Charting a course: Collective reflections and anticipations of emerging scholars in gerontology. *Generations Journal* 47(3; Fall 2023 Issue). [Epub 18 Oct 2023]. ([†]co-authors made equal contribution)
 15. **Homayouni R**, **Yu Q**, **Daugherty AM**, Raz N, Ofen N. 2023. KIBRA single nucleotide polymorphism is associated with hippocampal subfield volumes and cognition across development. *Brain Struct Funct*. 229(1): 223-230. [doi: 10.1007/s00429-023-02716-w](https://doi.org/10.1007/s00429-023-02716-w)
 16. **Takla T**[†], **Chargo A**[†], **Daugherty AM**^{*}, Fritz N^{*}. 2023. Cognitive contributors of backward walking in persons with multiple sclerosis. *Multiple Sclerosis International*. 2023: 5582242. [Epub 2023 Aug 11]. [doi: 10.1155/2023/5582242](https://doi.org/10.1155/2023/5582242) ([†]co-first author; ^{*}co-senior author)
 17. **Kero K**, Halter CM, Moll AC, Hanna SM, Woodard JL, Giordani B, **Daugherty AM**, Kavic V. 2023. Metacognition in community-dwelling older Black and African American adults during the COVID-19 pandemic. *J Alz Dis*. [Epub 2023 Sep 21]. [doi: 10.3233/JAD-221140](https://doi.org/10.3233/JAD-221140)
 18. **Canada KL**, **Saifullah S**, Gardner JC, Fabiani M, Gratton G, Sutton BP, Raz N, **Daugherty AM**. 2023. Development and validation of a quality control procedure for automatic segmentation of hippocampal subfields. *Hippocampus*. [Epub 2023 May 28]. [doi: 10.1002/hipo.23552](https://doi.org/10.1002/hipo.23552)
 19. **Daugherty AM**, Larsen B, Schröder N. 2023. Editorial: The Impacts of Iron Accumulation on Cognitive Impairments. *Frontiers in Human Neuroscience* (Edited Special Issue). 17: 1198276. [Epub 2023 April 27]. [doi: 10.3389/fnhum.2023.1198276](https://doi.org/10.3389/fnhum.2023.1198276)

20. Canada KL, Homayouni R, Yu Q, Foster Da' Jonae, Ramesh S, Raz S, **Daugherty AM**, Ofen N. 2023. Household socioeconomic status relates to specific hippocampal subfield volume across development. *Hippocampus*. [Epub 2023 May 3]. [doi: 10.002/hipo.23542](https://doi.org/10.002/hipo.23542)
21. Rajesh A, Betzel R, **Daugherty AM**, Noice T, Noice H, Baniqued PL, Voss MW, Kramer AF. 2023. Evaluating brain modularity benefits of an acting intervention: A discriminant-analysis framework. *Frontiers in Human Neuroscience*. 17: 1114804. [Epub 2023 May 4]. [doi: 10.3389/fnhum.2023.1114804](https://doi.org/10.3389/fnhum.2023.1114804)
22. Stanley JA, **Daugherty AM**, Gorey CR, Thomas P, Khatib D, Chowdury A, Rajan U, Haddad L, Amisadri A, Diwadkar VA. 2023. Basal glutamate in the hippocampus and the dorsal prefrontal cortex in schizophrenia: Relationships to cognitive proficiency investigated with structural equation modeling. *The World Journal of Biological Psychiatry*. [Epub 2023 April 24]. [doi: 10.1080/15622975.2023.2197653](https://doi.org/10.1080/15622975.2023.2197653)
23. Lucas HD, **Daugherty AM**, McAuley E, Kramer AF, Cohen NJ. 2023. Dynamic interactions between memory and viewing behaviors: Insights from dyadic modeling of eye movements. *JEP: HPP*. [Epub 2023 May 11]. [doi: 10.1037/xhp0001123](https://doi.org/10.1037/xhp0001123)
24. Delgorio PL, Hiscox LV, McIlvain G, Kramer MK, Diano AM, Twohy KE, Merritt AA, McGarry MDJ, Schwarb H, **Daugherty AM**, Ellison JM, Lanzi AM, Cohen ML, Martens CR, Johnson CL. 2023. Hippocampal subfield viscoelasticity in amnesic mild cognitive impairment evaluated with MR elastography. *NeuroImage: Clinical*. 37: 103327. [Epub 18 Jan 2023]. [doi: 10.1016/j.nicl.2023.103327](https://doi.org/10.1016/j.nicl.2023.103327)
25. Edwards EM, Stanley JA, **Daugherty AM**, Lynn J, Borich MR, Fritz NE. 2023. Associations between myelin water imaging and measures of fall risk and functional mobility in multiple sclerosis. *J Neuroimaging*, 33(1): 94-101. [Epub 20 Oct 2022]. [doi: 10.1111/jon.13064](https://doi.org/10.1111/jon.13064)
26. Edwards E, **Daugherty AM**, & Fritz N. 2023. Examining the influence of cognition on the relation between backward walking and falls in persons with multiple sclerosis. *Int J of MS Care*. [Epub 13 Sept 2022]. [doi: 10.7224/1537-2073.2021-130](https://doi.org/10.7224/1537-2073.2021-130)
- 2022 27. Ruiz-Rizzo AL, Viviano RP, **Daugherty AM**, Finke K, Muller HJ, Damoiseaux JS. 2022. Subjective cognitive decline predicts lower cingulo-opercular network functional connectivity in individuals with lower neurite density in the forceps minor. *NeuroImage*. 263: 119662. [Epub 2 Oct 2022]. [doi: 10.1016/j.neuroimage.2022.119662](https://doi.org/10.1016/j.neuroimage.2022.119662)
28. Levanovich P, **Daugherty AM**, Komnenov D, Rossi N. 2022. Dietary fructose and high salt in young male Sprague Dawley rats induces salt-sensitive changes in renal function in later life. *Physio Reports*. 10(18): e15456. [Epub Sep 2022]. [doi: 10.14814/phy2.15456](https://doi.org/10.14814/phy2.15456)
29. Delgorio PL, Hiscox LV, **Daugherty AM**, Sanjana F, McIlvain G, Pohlig RT, McGarry MDJ, Martens CR, Schwarb H, Johnson CL. 2022. Structure-function dissociations of human hippocampal subfield stiffness and memory performance. *J Neurosci*. 42(42): 7957-68. [Epub 19 Oct 2022]. [doi: 10.1523/JNEUROSCI.0592-22.2022](https://doi.org/10.1523/JNEUROSCI.0592-22.2022)
- 2021 30. Venkatesh A, **Daugherty AM**, Bennet IJ. 2021. Neuroimaging measures of iron and gliosis explain memory performance in aging. *Human Brain Mapping*. 42(17): 5761-70. [Epub 2021 Sep 14]. [doi: 10.1002/hbm.25652](https://doi.org/10.1002/hbm.25652)
31. Arble EA, Shankar S, Steinert SW, **Daugherty AM**. 2021. Mental health in residential healthcare workers during the COVID-19 Pandemic: The moderating role of selfobject needs. *Frontiers Psychiatry*. 12: 596618. [Epub 27 Oct 2021]. [doi: 10.3389/fpsy.2021.596618](https://doi.org/10.3389/fpsy.2021.596618)
32. **Daugherty AM**. 2021. Hypertension-related risk for dementia: A summary review with future directions. *Sem Cell Dev Bio*. 116: 82-89. [Epub 12 Mar 2021]. [doi: 10.1016/j.semcd.2021.03.002](https://doi.org/10.1016/j.semcd.2021.03.002)
33. Homayouni R, Yu Q, Ramesh S, **Daugherty AM**, Ofen N. 2021. Test-retest reliability of

- hippocampal subfield volumes in a developmental sample: Implications for longitudinal developmental studies. *J Neurosci Res.* 99(10): 2327-39. [Epub 22 Mar 2021]. doi: [10.1002/jnr.24831](https://doi.org/10.1002/jnr.24831)
34. [Rajesh A](#), Noice T, Noice H, Jahn, A, **Daugherty AM**, Heller W, Kramer AF. 2021. Can a theatre acting intervention enhance interference control in older adults? A brain-behavior investigation. *Front Aging Neurosci.* 15: 583220. [Epub 18 Mar 2021]. doi: [10.3389/fnhum.2021.583220](https://doi.org/10.3389/fnhum.2021.583220)
 35. Kairys A, **Daugherty AM**, Kavcic V, Shair S, Persad C, Heidebrink J, Bhaumik A, Giordani B. 2021. Laptop-administered NIH Toolbox and Cogstate Brief Battery in community-dwelling Black adults: Unexpected pattern of cognitive performance between MCI and healthy controls. *J Int Neuropsychol Soc.* 28(3): 239-48. [Epub 23 Mar 2021]. doi: [10.1017/S135561772100028X](https://doi.org/10.1017/S135561772100028X)
 36. Steinert SW, **Daugherty AM**, Shankar S, Schwarb HD, Cerjanic A, Sutton BP, Arble EA. 2021. A performance-based measure of emotion response control: A preliminary MRI study. *Scand J Psychol.* 62(3): 321-27. [Epub 6 Jan 2021]. doi: [10.1111/sjop.12705](https://doi.org/10.1111/sjop.12705)
 37. Kavcic V, **Daugherty AM**, Giordani B. 2021. Post-task modulation of resting state EEG differentiates MCI patients from healthy controls. *Alzheimer's Dement: DADM.* 13 (1): e12153. [Epub 20 Feb 2021]. doi: [10.1002/dad2.12153](https://doi.org/10.1002/dad2.12153)
 38. Delgorio PL, Hiscox LV, **Daugherty AM**, Sanjana F, Pohlig RT, Eliison JM, Martens CR, Schwarb H, McGarry MDJ, Johnson CL. 2021. Effect of aging on the viscoelastic properties of hippocampal subfields assessed with high-resolution MR elastography. *Cer Cor.* 31(6): 2799-2811. [Epub 18 Jan 2021]. doi: [10.1093/cercor/bhaa388](https://doi.org/10.1093/cercor/bhaa388)
 - 2020 39. **Daugherty AM**, Chopra T, Korzeniewski S, Levy P. 2020. COVID-19 as a Risk Factor for Alzheimer's Disease and Related Dementia: A Perspective for Future Clinical Research. *Psych Res.* 294: 113557. [Epub 4 Nov 2020]. doi: [10.1016.j.psychres.2020.113557](https://doi.org/10.1016/j.psychres.2020.113557)
 40. Wisse LEM, Chetelat G, **Daugherty AM**, De Flores R, LaJoie R, Mueller S, Shinohara R, Stark C, Wang L, Yushkevich P, Olsen R, Carr V. 2020. Hippocampal subfield volumetry from structural isotropic 1 mm³ MRI scans: A note of caution. *Hum Brain Mapp.* 42 (2): 539-550. [Epub 15 Oct 2020]. doi: [10.1002/hbm.25234](https://doi.org/10.1002/hbm.25234)
 41. Arble EP, Shankar S, Steinert SW, **Daugherty AM**. 2020. Mental health and emotional resiliency in Detroit nursing home workers during the COVID-19 pandemic. *J Nursing Home Research Sciences.* 6: 89. [Epub 2020 Oct 7]. doi: [10.14283/jnhrs.2020.23](https://doi.org/10.14283/jnhrs.2020.23)
 42. Foster CM, Kennedy KM, **Daugherty AM**, Rodrigue KM. 2020. Contribution of iron and A β differences in entorhinal and hippocampal subfield volume. *Neurol.* 95 (18): e2586-e2594. [Epub 2020 Sept 16]. doi: [10.1212/WNL.0000000000010868](https://doi.org/10.1212/WNL.0000000000010868)
 43. [Edwards EM](#), **Daugherty AM**, Nitta M, Atalla M, Fritz NE. 2020. Backward walking sensitively detects fallers in persons with multiple sclerosis. *Multiple Sclerosis and Related Disorders.* 45: 102390. [Epub 2020 Jul 10]. doi: [10.1016/j.msard.2020.102390](https://doi.org/10.1016/j.msard.2020.102390)
 44. **Daugherty AM**, Arble EP. 2020. Prevalence of Mental Health Symptoms in Residential Healthcare Workers in Michigan during the COVID-19 Pandemic. *Psych Res.* 291: 113266. [Epub 2020 Jun 30]. doi: [10.1016/j.psychres.2020.113266](https://doi.org/10.1016/j.psychres.2020.113266)
 45. Golja K, **Daugherty AM**, Kavcic V. 2020. Cognitive reserve and depression predict subjective reports of successful aging. *Arch Geron & Ger.* 90: 104137. [Epub 2020 Jun 6]. doi: [10.1016/j.archger.2020.104137](https://doi.org/10.1016/j.archger.2020.104137)
 46. Tang L, Pruitt PJ, Yu Q, Homayouni R, **Daugherty AM**, Damoiseaux JS, Ofen N. 2020. Differential functional connectivity in anterior and posterior hippocampus supporting

- memory formation. *Frontiers Human Neuroscience*. 14:204. [Epub 2020 Jun 5]. doi: [10.3389/fnhum.2020.00204](https://doi.org/10.3389/fnhum.2020.00204)
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Refereed Book Chapter

93. **Daugherty AM**, Lee CE. 2025. Brain iron accumulation as a biomarker of risk for cognitive decline in aging: Applications of the FRIENDS model. *Encyclopedia of the Human Brain* (2nd Ed., Elsevier), p. 175-188. [Epub 2024 Sept 18]. doi: [10.1016/B978-0-12-820480-1.00074-7](https://doi.org/10.1016/B978-0-12-820480-1.00074-7).

Edited Special Issue

Daugherty AM, Larsen BS, Schröder N. (Eds.) 2023. The impacts of iron accumulation on cognitive impairments. *Frontiers in Human Neuroscience* (Edited Special Issue).

Refereed Scholarly Writing

Schacter HL, Brown SG, **Daugherty AM**, Brummelte S, Grekin E. Dec 01 2021. "Compassionate teaching yields the most benefits (opinion)." *Inside Higher Ed*. <https://www.insidehighered.com/advice/2021/12/01/compassionate-teaching-yields-most-benefits-opinion>

Submitted Research Manuscripts

Chargo AN, Fritz NE, **Daugherty AM**. Spatial maps in the mind: An integrative review of mobility's role in wayfinding. Submitted.

Homayouni R, Saifullah S, Chargo AN, Canada KL, Raz N*, Ofen N*, **Daugherty AM***. Two-year changes in hippocampal subfield volumes are age-dependent across the lifespan. Under review. * Equal senior author contributions.

Chargo AN, Dahle CL, Raz N, **Daugherty AM**. Age- and sex-related differences in cognitive map recall following a spatial navigation task. Under review.

Canada KL, Yu Q, **Daugherty AM**, Raz S, Ofen N. Developmental age differences in memory are specific to

mnemonic content, not test delay. Under review.

Abbawi MM, VanNostrand M, Monaghan PG, Takla TN, Yu B, **Daugherty AM**, Stanley JS*, Fritz NE*. Structural and functional changes with 8 weeks of backward walking training in Multiple Sclerosis: A case series. In revision. * Equal contribution as senior author.

Takla TN, Monaghan P, **Daugherty AM**, Fritz N. Avoidance behavior mediates the relationship between concern about falling and impaired mobility in Multiple Sclerosis. Under review.

PROFESSIONAL RESEARCH PRESENTATION

Invited Talks

- Daugherty AM.** 06/10/2024. MRI Biomarkers of Pre-Clinical Cognitive Decline: Insights from the Detroit Aging Brain Study. Beyond Amyloid Symposium, Michigan Alzheimer's Disease Research Center.
- Daugherty AM.** 10/23/2023. Hippocampal Subfield Structure and Function Across the Lifespan: New research frontiers with *in vivo* imaging methods. Beckman Institute, University of Illinois Urbana-Champaign.
- Daugherty AM.** 10/16/2023. Hippocampal Subfield Group: Harmonized Body Protocol. Marcus Wallenberg Symposium on "Activities of the Hippocampal Subfields Group – a progress update". Online international webinar.
- Daugherty AM.** 04/21/2023. Hippocampal subfield aging: New research frontiers with *in vivo* imaging methods. University of Nebraska Medical Center.
- Daugherty AM.** 02/21/2023. Brain structure to structural model: Applications of structural equation modeling in cognitive neuroscience research. Amsterdam UMC.
- Daugherty AM.** 10/26/2022. Friend & Foe: Iron-related oxidative damage in cognitive aging. Research Rounds, Baycrest Centre.
- Daugherty, AM.** 02/28/2022. Techniques of segmenting hippocampal subfields. Podium presentation, St. Jude's Research Hospital Symposium.
- Daugherty AM.** 11/03/2021. Iron-related oxidative damage: Development of a biomarker from brain aging to dementia risk. Grand Rounds, Department of Psychiatry, Wayne State University.
- Daugherty AM.** 09/30/2021. Cardiovascular health modifying brain and cognitive aging. Grand Rounds, McLaren-Flint Internal Medicine.
- Daugherty AM.** 05/14/2021. Iron-related oxidative damage in Alzheimer's disease and related dementia. National Alzheimer's Coordinating Center Spring Conference.
- Daugherty AM.** 05/05/2021. Iron-related oxidative damage in neural and cognitive aging. Research Symposium, Lund University.
- Daugherty, AM.** 03/24/2021. Friend & Foe: Iron-related oxidative damage in cognitive aging. Psych Forum, San Jose State University
- Daugherty AM.** 10/13/2020. COVID-19 as a risk factor for Alzheimer's disease and related dementia. Lost in Translation: Research Addressing Health Disparities in Aging Populations. Joint Symposium.
- Daugherty AM.** 05/29/2020. Brain iron accumulation as a pathway of hypertension-related risk for Alzheimer's disease and related dementia. MI Alzheimer's Disease Research Center Virtual Research Symposium.
- Daugherty, AM.** 05/2020. Brain iron as biomarker of impending cognitive decline. Invited talk, Fiendel Virtual Brain & Mind Seminar, McGill University.

- Daugherty AM.** 10/31/2019. Brain iron accumulation as a harbinger of neural and cognitive decline. Invited talk, Michigan State University.
- Daugherty AM.** 11/2018. Hippocampal Subfield Segmentation: Updates from the Harmonization Effort. Chair and speaker, pre-meeting Society for Neuroscience.
- Daugherty AM,** Burzynska AZ, Ehlers D, Awick E, Fanning J, Voss M, McAuley E, Kramer AF. 06/2018. Neural correlates of aerobic exercise benefits to episodic memory function: A randomized control intervention study in older adults. Invited talk, International Society for Behavioral Neuroscience Annual Meeting.
- Daugherty AM.** 10/2018. Promises and limitations of brain iron as a biomarker of neural cognitive decline. Invited talk, Neurology Grand Rounds, Wayne State University.
- Daugherty AM.** 04/2017. Neural cognitive health risk and protection: Insights from the study of aging and traumatic brain injury. Invited talk, Oklahoma University.
- Daugherty AM,** Burzynska AZ, Ehlers D, Awick E, Fanning J, Voss M, McAuley E, Kramer AF. 01/2017. Neural correlates of aerobic exercise benefits to episodic memory function: A randomized control intervention study in older adults. Invited talk, Dallas Aging and Cognition Conference.
- Daugherty AM,** invited nanosymposium co-chair. 11/2016. “Medial Temporal Lobe Subregion Imaging in Normal and Pathological Memory”, Society for Neuroscience annual meeting.
- Daugherty AM,** Bender AR, Yu Q, Shafer AT, Arshad M, Ofen N, Raz N. 11/2016. Advanced age, vascular risk and inflammation exacerbate differential shrinkage of hippocampal subfields in healthy adults: a two-year longitudinal study. Selected nanosymposium oral presentation at Society for Neuroscience annual meeting.
- Daugherty AM.** 11/2016. Subfields within the hippocampal body: Inner boundary definitions update. Invited talk, Hippocampal Subfield Segmentation Retreat, HS4.
- Daugherty AM,** invited moderator. 11/2016. A harmonized protocol for hippocampal subfield segmentation on MRI: What we’ve accomplished and next steps.
- Daugherty AM.** 09/2016. Brain iron accumulation as a biomarker of impending neural and cognitive decline in aging. Invited talk, Cognitive Neuroscience Lecture Series, University of Illinois at Urbana-Champaign.
- Daugherty AM.** 09.2016. Health factors and behaviors that shape neural and cognitive aging. Invited talk, Beckman Postdoctoral Fellows lunch, University of Illinois at Urbana-Champaign.
- Daugherty AM.** 05/2016. Hippocampal subfields: Measurement and cognitive correlates. Invited talk, Neuroimaging of Aging and Cognition Laboratory, UT Dallas.
- Daugherty AM.** 10/2015. Hippocampal body ranging on high-resolution images: Definitions and reliability. Invited talk, Hippocampal Subfield Boundary Retreat.
- Daugherty AM,** Raz N. 11/2014. Longitudinal iron accumulation is associated with regional brain shrinkage. Selected nanosymposium oral presentation at Society for Neuroscience Annual Conference.

Conference Posters and Podium Presentations (Selected Abstracts; mentored student underlined)

- Chargo AN, Dahle CL, Raz, N, **Daugherty AM.** 11/2023. Age-sensitive neural and cognitive correlates of cognitive mapping: Insights into wayfinding deficits. Poster presentation, Society for Neuroscience.

- Takla TN, Chargo AN, **Daugherty AM**, Fritz NE. 11/2023. Impaired mobility negatively impacts navigation ability and map recall in a virtual environment in persons with Multiple Sclerosis. Poster presentation, Society for Neuroscience.
- Homayouni R, Canada K, Saifullah S, Foster D, Thill C, **Daugherty A**, Ofen N. 02/2023. Age-related Differences in Hippocampal Subfield Volumes Across the Lifespan: A Meta-analysis. Poster presentation, Dallas Aging and Cognition Conference (DACC).
- Lee C, Giordani B, Hampstead B, **Daugherty AM**. 02/2023. Caudate Iron Concentration Predicts 1-year Cognitive Decline in Aging and Dementia of the Alzheimer's Type. Poster presentation, Dallas Aging and Cognition Conference (DACC).
- Chargo AN, Dahle CL, Raz N, **Daugherty AM**. 02/2023. Age- and Sex-Related Differences in Cognitive Map Recall Following a Spatial Navigation Task. Poster presentation, Dallas Aging and Cognition Conference (DACC).
- Marton V, Murphy B, Atalla M, Foster D, **Daugherty A**, Barnett D. 04/2021. Low parental control predicts healthy separation-individuation among diverse college students regardless of generational status. Poster presentation, Society for Research in Child Development (SRCD) Virtual Biennial Meeting.
- Homayouni R, Yu Q, Canada LK, Daugherty AM, Ofen N. 03/2021. Distal Cues, Proximal Cues, or Both? Young Children's Accurate Recall in a Virtual Morris Water Maze. Poster Presentation, Cognitive Neuroscience Society.
- Edwards EM, **Daugherty AM**, Nitta M, Atalla M, Fritz NE. 10/2020. Examining the influence of cognition on the relation between backward walking and falls in persons with Multiple Sclerosis. Poster presentation, Consortium of Multiple Sclerosis Centers.
- Delgorio PL, Hiscox LV, Pohlig RT, Sanjana F, **Daugherty AM**, Schwarb H, Martens C, McGarry MDJ, Johnson CL. 08/2020. Reliable high-resolution MR elastography protocol to assess hippocampal subfield viscoelasticity in aging. Podium presentation, International Society for Magnetic Resonance in Medicine.
- Daugherty AM**, Shair S, Kavcic V, Giordani B. 07/2020. Slowed processing speed contributes to cognitive deficits in amnesic and non-amnesic mild cognitive impairment. Poster presentation, Alzheimer's Association International Conference.
- Schwarb H, Delgorio PL, **Daugherty AM**, McGarry MDJ, Cohen NJ, Johnson CL. 05/2020. MR elastography measures of hippocampal subfield viscoelasticity are related to relation memory outcomes across the lifespan. Power presentation, Cognitive Neuroscience Society.
- Zabik NL, Iadipaolo A, Peters C, **Daugherty AM**, Burghardt K, Rabinak CA. Hippocampal activation during recall of extinction learning predicts amygdala activation and is not moderated by genetic endocannabinoid variation." Poster presentation, Society of Biological Psychiatry.
- Delgorio PL, Hiscox LV, Sanjana F, **Daugherty AM**, McGarry MDJ, Schwarb H, Martens CR, Johnson CL. 10/2019. Healthy aging and stiffness of the brain, hippocampus and hippocampal subfields. Poster presentation, Society for Neuroscience.
- Rajesh A, Noice T, Noice H, Jahn A, **Daugherty AM**, Kramer A. 09/2019. Inhibition in context: Can an acting intervention improve executive control in older adults? Poster Presentation, Beckman Institute of Advanced Science and Technology.
- Daugherty AM**, Yu Q, Bender AR, Tang L, Dahle CL, Ofen N, Raz N. 10/2019. Age-related shrinkage of medial temporal lobe subfields is differentially exacerbated by arterial hypertension: A six-year

longitudinal study of healthy adults. Poster presentation, Society for Neuroscience annual meeting.

Daugherty AM, Kennedy KM, Rodrigue KM. 11/2018. Genetic predisposition for inflammation exacerbates effects of striatal iron content on cognitive switching in healthy aging. Poster presentation, Society for Neuroscience annual meeting.

Abstracts Published in Conference Proceedings

Takla TN, Monaghan PG, **Daugherty AM**, Fritz NE. 2024. Understanding the role of avoidance behavior in mobility impairments linked to concern about falling in Multiple Sclerosis. *Multiple Sclerosis and Related Disorders*, 91, 105933. doi: 10.1016/j.msard.2024.105933

Candace R, Schutte D, **Daugherty A**. 2023. Development and validation of the novel medication taking instrument – four facets of adherence (MTI-4). *Innov Aging*, 7(Suppl 1): 1018. doi: 10.1093/geroni/igad104.3272

Halter CM, Moll AC, Adams H, Hanna S, DiCerbo LM, **Daugherty AM**, Woodard JL, Giordani B, Kavcic V. 2023. Six-month consistency of NIH toolbox cognitive battery scores in healthy older Black women with subjective cognitive decline. *Alzheimer's and Dementia*, 19(S18): e078922. doi: 10.1002/alz.078922

Moll A, Halter C, Adams H, DiCerbo L, Kavcic V, **Daugherty AM**, Woodard J, Giordani B. 2023. Blood pressure measures are not correlated with NIH toolbox cognitive battery performance in Black older adults. *Innov Aging*, 7(Suppl 1): 813. doi: 10.1093/geroni/igad104.2620

Halter CM, Moll AC, Kero K, Hanna S, DiCerbo LM, Woodard JL, Giordani B, **Daugherty AM**, Kavcic V. 2022. Positive affect and cognitive functioning in older African American adults. *Alzheimer's & Dementia*, 18(S8), e069077. doi: 10/1002/alz.069077

Kero K, Woodard JL, Giordani B, **Daugherty AM**, Shair S, Hanna S, DiCerbo LM, Kavcic V. 2022. Metacognition in older African American adults during the COVID-19 pandemic. *Alzheimer's & Dementia*, 18(S8), e066425. doi: 10.1002/alz.066425

Kero K, Halter CM, Woodard JL, Giordani B, **Daugherty AM**, Kavcic V. 2022. Metacognition and emotions in older African American adults. *Innovation in Aging*, 6(S1), 546. doi: 10/1093/geroni/igac059.2069

Olsen RK, Carr VA, **Daugherty AM**, La Joie R, Amaral RSC, Amunts K ... On behalf of the Hippocampal Subfield Segmentation group. 2019. Progress update from the hippocampal subfields group. *J Alzheimer's Disease*, 11(1). doi: 10.1016/j.dadm.2019.04.001.

Wisse LEM, Berron D, Olsen RK, **Daugherty AM**, Amunts K, Augustinack J, Baker A ... On behalf of the Hippocampal Subfield Segmentation group. 2019. The development of a harmonized segmentation protocol for hippocampal subfields: an update. *Alzheimer's and Dementia*, 15(7), P1549-P1550. doi: 10.1016/j.alz.2019.08.139

La Joie R, **Daugherty AM**, Wisse LEM, Amaral RSC, Amunts K, Augustinack J ... On behalf of the hippocampal subfield segmentation group. 2018. A harmonized protocol for in vivo human hippocampal subfield segmentation: initial results of the 3 Tesla protocol. *Alzheimer's and Dementia*, 14(7), P1577. doi: 1.1016/j.alz.2018.07.137.

Wisse LEM, **Daugherty AM**, Amaral RSC, Berron D, Carr VA, Ekstrom AD ... On behalf of the Hippocampal Subfield Segmentation group. 2016. A harmonized protocol for medial temporal lobe subfield segmentation: Initial results of the 3-Tesla protocol for the hippocampal body. *Alzheimer's and Dementia*, 12(7), P631. doi: 10.1016/j.alz.2016.06.1265.

Wisse LEM, **Daugherty AM**, La Joie R, Insausti R, Yassa M, Carr VA ... On behalf of the Hippocampal Subfield Segmentation group. 2015. Towards a harmonized protocol for hippocampal subfield segmentation: An update. *Alzheimer's and Dementia*, 11(7), P881. doi: 10.1016/j.alz.2015.08.087.

AWARDS AND HONORS

Professional Society

2021 Outstanding Junior Faculty Research, Wayne State University Academy of Scholars

Paper Recognition and Honors

2018 Top 20 Most Cited Article and Top 20 Most Downloaded Article in *Hippocampus* in 2018
 "A harmonized segmentation protocol for hippocampal and parahippocampal subregions: Why do we need one and what are the key goals?"

Monetary Paper and Poster Presentation Awards

2021 Rising Star Award, National Alzheimer's Coordinating Center, Spring Conference

Teaching and Mentoring Awards

2022 Excellent Postdoctoral Mentorship Award, Graduate School, Wayne State University

2021 Excellence in Teaching, College of Liberal Arts and Sciences, Wayne State University

TEACHING EXPERIENCE

Instructor of Record Student evaluation reports available upon request

FA 2023	Functional Neuroanatomy (graduate seminar) Instructor, Independent Lecture with Laboratory Department of Psychology, Wayne State University, Detroit, MI
Recurring FA 2020-22	Psychology of Perception: Fundamental Processes (undergraduate seminar) Instructor, Independent Lecture Department of Psychology, Wayne State University, Detroit, MI
Recurring WI 2018-present	Applied Multivariate Methods in Psychology (graduate seminar) Instructor, Independent Lecture with Laboratory Department of Psychology, Wayne State University, Detroit, MI
2015	Socio-Emotional Changes in Aging (undergraduate seminar) Instructor, Independent Lecture Family Life Services Department, Concordia University, Ann Arbor MI
2010	Brain and Behavior (undergraduate, upper division) Instructor, Independent Lecture Psychology Department, Wayne State University, Detroit MI
FA/WI 2008- 09	Introductory Psychology, Laboratory Section (undergraduate) Instructor, Lecture and Laboratory Psychology Department, Wayne State University, Detroit MI

Contributing Lecturer

- Recurring
2024-present Introduction to Research: Study Design and Inferential Statistics
Session Instructor, 2-3 hr seminar on applied methods and demonstration
Physician Assistant Program, Eugene Applebaum School of Pharmacy and Health
Science, Wayne State University, Detroit, MI
- Recurring FA
2019-present Fundamentals of Neuropsychiatric Disorders (graduate seminar)
Contributing Instructor, topics in cognitive assessment and dementia
Department of Psychiatry, Wayne State University, Detroit, MI
- Recurring WI
2018-present Fundamentals of Neuroimaging (graduate seminar)
Contributing Instructor, topics in aging
Department of Psychiatry, Wayne State University, Detroit, MI

Seminar / Workshop

- 2024
(Ongoing) Lead instructor and trainer, dissemination of the Hippocampal Subfield Group Harmonized
Protocol for subfield segmentation in the hippocampal body.
04/2024, Toronto: 31 attendance.
- 2021 Applied Methods in Univariate and Multivariate Statistics
Lead Instructor; 3-part series for research faculty
Research Design and Analysis Consulting, Wayne State University, Detroit, MI
- 2020 Mixed Methods Research Café (Sponsored by WSU RDA)
Co-Lead Instructor (with M. Luborsky, Anthropology/IOG); 3 hours in-person instruction
Research Design and Analysis Consulting, Wayne State University, Detroit, MI
- 2019 Topics in SEM: Applications to Cognitive Neuroscience in Development and Aging
Lead Instructor; 5-part series for graduate students, post-doctoral fellows and faculty
Research Design and Analysis Consulting, Wayne State University, Detroit, MI
- 2016-17 Latent Modeling Seminar (advanced graduate, weekly meetings)
Instructor, topics in structural equation modeling and longitudinal methods
Beckman Institute, University of Illinois Urbana-Champaign, Urbana, IL

Invited Guest Lectures

- 2018 Neural Correlates of Personality (graduate seminar)
Psychology Department, Eastern Michigan University, Ypsilanti MI
- 2017 Metals in Your Head: Iron in Brain Aging (undergraduate seminar)
Psychology Department, Oklahoma University, Norman OK
- 2016 Neural Correlates of Personality (graduate seminar)
Psychology Department, Eastern Michigan University, Ypsilanti MI
- 2015 Neuropsychology: Past and Current Perspectives (undergraduate)
Psychology Department, St. Benedict's College St. John's University, Saint Cloud MN
- 2014 Spatial Navigation Processes and Neural Correlates (graduate seminar)
Psychology Department, Wayne State University, Detroit MI
Cognitive Aging and Dementia (graduate seminar)
Physical Therapy, Eugene Applebaum College of Pharmacy & Health Services, Detroit MI
- 2013 Multiple Regression; Mediation Analyses; Statistics for Small Samples
Cognitive and Brain Development Laboratory, Wayne State University, Detroit MI
Cognitive Aging and Dementia (graduate seminar)

Physical Therapy, Eugene Applebaum College of Pharmacy & Health Services, Detroit MI

- 2012 The Two Phases of Iron across the Lifespan
 Social Cognitive Affective Neuroscience Laboratory, Wayne State University, Detroit MI
 Cognitive Aging and Dementia (graduate seminar)
 Physical Therapy, Eugene Applebaum College of Pharmacy & Health Services, Detroit MI

STUDENT RESEARCH SUPERVISION

List of other Student Thesis and Exam Committees available on request

Post-Doctoral Fellow Supervision

- 2020-present Kelsey Canada, PhD, Institute of Gerontology, Wayne State University (Co-mentor)
 2024-present Roya Homayouni, PhD, Institute of Gerontology, Wayne State University

Graduate Student Supervision

- 2024-present Najae Dixon, Clinical Psychology, Wayne State University (Co-mentor)
 2021-present Christine Lee, Translational Neuroscience(Psychiatry), Wayne State University
 Alexis (Campbell) Chargo, Cognitive Neuroscience (Psychology), Wayne State University
 Candace Ryan, Nursing, Wayne State University (Co-mentor)
 2020-2024 Roya Homayouni, Cognitive Neuroscience (Psychology), Wayne State University (Co-mentor)

Doctoral Thesis Chair

- 2024-present Alexis (Campbell) Chargo, Cognitive Neuroscience (Psychology)
 Christine Lee, Translational Neuroscience(Psychiatry)
 2023-present Candace Ryan, Nursing (Co-chair)
 2022-2024 Roya Homayouni, Cognitive Neuroscience (Psychology; Co-chair)
 2019-2021 Qijing Yu, Cognitive Neuroscience (Psychology; Co-chair)

Qualifying Exam Chair

- 2024 Alexis (Campbell) Chargo, Cognitive Neuroscience (Psychology)
 Christine Lee, Translational Neuroscience(Psychiatry)
 2022 Candace Ryan, Nursing (Co-chair)
 2021-22 Roya Homayouni, Cognitive Neuroscience (Psychology; Co-chair)

Mentored External Grants

Funded

Title: Investigating Fear of Falling in Multiple Sclerosis: An Interplay of Neural, Motor, Cognitive, and Psychological Factors. NIH Ruth L. Kirschstein NRSA Fellowship (F31). 2024-2026.

Student PI: Taylor Takla, Graduate Student, WSU.

Role: Co-Mentor

Title: Mobility as a risk biomarker for the onset of cognitive decline. Michigan Alzheimer's Disease Research Center, Early Career Mentee. 2024-2026.

PI: Patrick Monaghan, Ph.D.

Role: Co-Mentor

Title: Advanced multi-shell diffusion MRI in white matter as risk biomarkers for cognitive aging and vascular cognitive impairment. Michigan Alzheimer's Disease Research Center, Early Career Mentee. 2024-2026.

PI: Shruti Mishra, MD

Role: Mentor

Title: The role for in vivo glutamate modulation in maintaining cognitive control in trauma-exposed adolescents. NIH Ruth L. Kirschstein NRSA Fellowship (F31). 2023-2026.

Student PI: John France, Graduate Student, WSU.

Role: Co-Mentor

Title: An integrative multisite study of the influence of socioeconomic disparities on hippocampal subfield developmental trajectories. NIMHD NRSA Post-doctoral Fellowship (F32). 2022-2025

Mentored PI: Kelsey Canada, Ph.D.

Role: Co-Sponsor

Title: Neural and Behavioral Mechanisms of Avoidance Behavior and its Impact on Fear Extinction in Adults with PTSD. NIH Ruth L. Kirschstein NRSA Fellowship (F31). 2019-2022

Student PI: Nicole Zabik, Graduate Student, WSU.

Role: Co-Mentor

Submitted

Title: The path less traveled: Exploring age-related changes in mobility and its impact on cognitive mapping. NIH/NIA R36 Dissertation Award.

Student PI: Alexis Chargo, Graduate Student, WSU.

Role: Mentor/Sponsor

Submission: 10/06/2023; resubmission 07/06/2024

Title: Ambient PM2.5 exposure as a risk factor for accelerated brain and cognitive aging. NIH Ruth L. Kirschstein NRSA Fellowship (F31).

Student PI: Christine Lee, Graduate Student, WSU.

Role: Sponsor

Submission: 04/08/2024; planned resubmission

Title: Investigating the neurobiology of behavior predicting long-term weight loss maintenance in individuals with obesity using 1H fMRS. NIH Ruth L. Kirschstein NRSA Fellowship (F31).

Student PI: Jillian Eichstaedt, Graduate Student, WSU.

Role: Mentoring Team

Submission: 12/08/2023; resubmission 8/05/2024

Not Funded

Title: Cardiorespiratory fitness, hippocampal subfield volumes, and arterial stiffness as predictors of impaired memory performance in aging and Alzheimer's disease. NIH Ruth L. Kirschstein NRSA Fellowship (F31).

Student PI: Jennie Gardner, Graduate Student, University of Illinois Urbana-Champaign.

Role: Co-Sponsor

Submission: 04/08/2023

Title: Neuronal ensembles underlying stress-induced and cocaine-primed reinstatement of cocaine-seeking. NIH Ruth L. Kirschstein NRSA Fellowship (F31).

Student PI: Alixandria (Trombley) Mascarin, Graduate Student, WSU.

Role: Mentoring Team

Original submission: 08/04/2022; resubmission 04/08/2023

Title: Investigating the role of norepinephrine on fear learning during morphine withdrawal in female and male rats. NIH Ruth L. Kirschstein NRSA Fellowship (F30).

Student PI: Grant LeVasseur, Medical/Graduate Student, WSU.

Role: Mentoring Team

Original submission: 04/08/2022; resubmission 04/08/2023

Title: Intergenerational Impacts of Maternal Childhood Interpersonal Violence Exposure on Child Internalizing Psychopathology and Fear Neurobiology. Early Career Professional Development (K01).

Mentored PI: Anais Stenson, Ph.D., WSU.

Role: Mentoring Team

Original submission: 02/01/2023

Undergraduate Research underline indicates undergraduate presenter

Harris AM, Sandhu, A, Dahle C, Raz N, Daugherty AM. 04/2020. Age-related differences in visuospatial memory accuracy. Poster abstract at Lifespan Alliance Research Day. (Disrupted by COVID-19)

Tirumala S, Khan U, Thakur R, Harris AM, Kavic V, Giordani B, Daugherty AM. 04/2020. Distressed community index differentially predicts neuropsychological performance in older African American adults. Poster abstract at Lifespan Alliance Research Day. (Disrupted by COVID-19)

Saifullah S, Sutton BP, Daugherty AM. 04/2020. Age-related differences in hippocampal subfield volumes from MRI. Poster abstract at National Conference on Undergraduate Research. (Disrupted by COVID-19)

Saifullah S, Sutton BP, Daugherty AM. 07/2019. Age-related differences in hippocampal subfield volumes from MRI. Poster presentation at Wayne Med-Direct Summer Research Session.

PROFESSIONAL SERVICE

Research Service

2024-present Member of Editorial Board, *Journal of International Neuropsychological Society*

2021-present Chair, Data and Safety Monitoring Board, NIH-funded R33 Study (PI: Rabinak, WSU)

2016-present Review Editor, Cognitive Neuroscience for *Frontiers in Human Neuroscience*

05/2024 Ad Hoc Reviewer, Neurological Foundation (Auckland, New Zealand) Pilot Project Program

06/2023 Ad Hoc Reviewer, NIH (Neurological and Neuropsychological Injuries and Disorders) Study Section

10/2022 Ad Hoc Reviewer, NIH (Human Complex Mental Function) Study Section

2021-2023 Editor, Special Issue in *Frontiers in Human Neuroscience*: "The impacts of iron accumulation on cognitive impairments"

Ad Hoc Journal Reviewer (since 2014)

Addiction Biology; Aging, Neuropsychology, and Cognition; Am J Neuroradiology; Behavioral Neuroscience (APA); Biology Letters; Biological Psychology; BMC Neurology; Cerebral Cortex; Clinical Endocrinology; Frontiers Journals; Hippocampus; Human Brain Mapping; J Alzheimer's Disease; Journal Cerebral Blood Flow & Metabolism; J Gerontology: Medical Sciences; J Neuroscience; Magnetic Resonance Materials in Physics; Mind Brain Education; Nature Communications Biology; Neurobiology of Aging; NeuroImage; Neuropsychologia; PLOS One; Psychiatry Research: Neuroimaging;

Psychological Science; Psychoneuroendocrinology; Scientific Reports, Nature; Trends in Neuroscience Education

International Service

- 2015-present Member, Steering Committee, Hippocampal Subfield Segmentation Group
- 2020-2021 Chair, Steering Committee, Hippocampal Subfield Segmentation Group
<http://www.hippocampalsubfields.com/>
- 2019-2020 Co-Chair, Steering Committee, Hippocampal Subfield Segmentation Group

University Service

- 2023-present Chair, Magnetic Resonance Research Facility (MRRF) Advisory Committee
- 2023-present Chair, Magnetic Resonance Research Facility (MRRF) Pilot Project Review Committee
- 2018-present Faculty, Research Design and Analysis Consulting (RDA)
- 2018-2023 Member, Magnetic Resonance Research Facility (MRRF) Pilot Project Review Committee
- 04/2024 Reviewer, OVPR Bridge Grant Program
- 04/05/2023 Panelist, OVPR research development seminar: Leveraging Resources and Relationships for Research, Wayne State University
- 11/26/2018 Dine with a Professor, Undergraduate Research Warriors, Wayne State University

Department and College Service

- 2024-present Member, Behavioral and Cognitive Neuroscience Faculty Search Committee
- 2022-present Member, Student Advisory Committee, Translational Neuroscience Program
- 2021-present Faculty Mentor, Nu Rho Psi Undergraduate Honor Society
- 2019-present Member, Translational Neuroscience Program Steering Committee
- 2019-present Member, Translational Neuroscience Program Graduate Admission Committee
- 2019-present Director, Institute of Gerontology Postdoctoral Research Fellow Training Program
- 2018-present Member, Measurement Committee, Psychology Department
- 2023-2024 Member, Chair Review Committee, Department of Psychology
- 2024 Judge, Graduate Student Organization Research Day
- 2023 New Investigator Grant, Application Review
- 2022-2023 Member, Teaching Faculty Search Committee, Department of Psychology
- 2022-2023 Created and Implemented Custom Individual Development Plan tool for Doctoral Neuroscience students in Psychology and Psychiatry
- 2022 Judge, 3 Minute Thesis Competition, Translational Neuroscience Program
- 2022 Member, CLAS Teaching Award Selection Committee
- 2021-2022 Member, Institute of Gerontology Faculty search committee

2020-2021	Co-Chair, Psychology Faculty Learning Community
2020-2021	Member, Social and Personality Faculty search committee
2019-2020	Co-Director, Behavioral and Cognitive Neuroscience Brown Bag Series
2019	Judge, Lifespan Alliance Research Day, Institute of Gerontology
2019	Judge, Translational Neuroscience Research Day, School of Medicine
2019	Member, Translational Neuroscience Program Graduate Admissions Committee

COMMUNITY-ENGAGED SCHOLARSHIP

Research-Based Informational Resources

2020-21 "Brain Health and Aging" website resources for community members:
<https://www.olderadultnestegg.com/for-older-adults/brain-health-aging/>

Lectures Certified for Continuing Education Units

2024	Cognition in Focus: Where we stand in Alzheimer's research & practical strategies for supporting brain health (Keynote of "A Meaningful Life with Alzheimer's Disease Conference, Alzheimer's Association; Hybrid event, Tot Attendance: 460). Everyday Activities to Build Resiliency against Cognitive Decline in Aging and Dementia (broadcast to 17 sites across Mid-west, Tot Attendance: 131) 1.5 hours Certified CE, National Nursing and Michigan Social Work Associations
2023	Everyday Activities to Build Resiliency against Cognitive Decline in Aging and Dementia (2 events; Tot Attendance: 500) 1.5 hours Certified CE, National Nursing and Michigan Social Work Associations
2021	Lifestyle Interventions for Cognitive Decline (2 events; Tot Attendance: 696) 1.5 hours Certified CE, National Nursing and Michigan Social Work Associations
2020	Lifestyle Interventions for Cognitive Decline (2 events; Tot Attendance: 367) 1.5 hours Certified CE, National Nursing and Michigan Social Work Associations
2015	Cognitive Function as We Age 1.5 hours Certified CE, National Nursing and Michigan Social Work Associations
2013	Memory Function as We Age 1.5 hours Certified CE, National Nursing and Michigan Social Work Associations
2012	Biological and Lifestyle Factors that Affect Cognition 1.5 hours Certified CE, National Nursing and Michigan Social Work Associations

Community Education Talks and Board of Visitor Presentations

2024	Brilliant Minds Symposium. Sept 14, 2024. Flint Institute of Arts. (Attendance: 45) Resilient Aging: Promoting Cognitive Health across the Lifespan. Sept 10, 2024. Birmingham Metro Women's Club. (Attendance: 64) Lifestyle for Resilient Aging: Promoting Your Brain and Cognitive Health. Sept 9, 2024. Bloomfield Township Senior Recreation Center. (Attendance: 22). Remembering and Forgetting: Everyday things to help your memory during aging. May 16, 2024. Franklin Public Library. (Attendance: 10) Let's Talk Brain Health at Any Age. Apr 25, 2024. Southeast Michigan, Alzheimer's Association. (Attendance: 24)
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- Building Resiliency to Cognitive Decline in Aging and Dementia. Feb 23, 2024. Birmingham Senior Men's Club. (Attendance: 152)
- 2023 Promoting Brain and Cognitive Health in Aging. Oct 11, 2023. SOAR Lifelong Learning Institute. (Attendance: 100)
- 2021 Hippocampal Subfield Measurement: Development of a Dementia Risk Assessment Tool. Sept 21, 2021. Institute of Gerontology Board of Visitors.
- Lifestyle Strategies to Promote Cognitive Health. June 15, 2021. Healthier Black Elders Center, Lunch and Learn.
- 2018-19 Virtual Science Classroom Visits, 4th and 5th grade classrooms in under-served communities
- 2018 Healthy Brain Aging: What We Know from the Detroit Aging Brain Study. June 15, 2018. Institute of Gerontology Board of Visitors.

Research Awareness Events

- 2021, 22, 23, 24 Detroit Alzheimer's Awareness Walk (Alzheimer's Association)
- 2020 Detroit Heartwalk (American Heart Association)

MEDIA APPEARANCES AND RESEARCH COVERAGE

- "Want to cut your dementia risk? Keep your blood pressure in check." Sime, R. *The Washington Post*. 30 Oct 2024. <https://www.washingtonpost.com/wellness/2024/10/30/dementia-hypertension-high-blood-pressure-tips/>
- "When does the human brain peak? Here's what scientists actually know about cognitive decline?" Spivack, E. *Inverse*. 28 Oct 2024. <https://www.inverse.com/health/human-brain-peak-cognitive-functioning-neuroscience>
- "The Aging Brain vs. Alzheimer's Disease" *Senior Resources* podcast. 09 Aug 2024. <https://www.seniorresource.com/the-aging-brain-vs-alzheimers-disease/>
- "Celebrating You: Honoring research participants and brain health" *Today@Wayne*. 03 Oct 2023. (Print Interview, Research Feature) <https://today.wayne.edu/news/2023/10/03/celebrating-you-honoring-research-participants-and-brain-health-58735>
- "The aging brain: How can we slow its decline?" *Connect*. Area Agency on Aging 1B. 01 Jun 2023. (Print Interview)
- "Lifestyle changes to keep your brain healthy" (subscriber access only). 09 May 2023. *Royal Oak Tribune*, *Macomb Daily*, *The Oakland Press*. (Print Interview)
- <https://www.dailytribune.com/2023/05/09/lifestyle-changes-to-keep-your-brain-healthy/>
<https://www.macombdaily.com/2023/05/09/lifestyle-changes-to-keep-your-brain-healthy/>
<https://www.theoaklandpress.com/2023/05/09/lifestyle-changes-to-keep-your-brain-healthy/>
- "Is There a Way to Keep Your Brain 'Young' and Healthy as You Age?" *Call Me Curious* (Wondery) podcast. E40. 08 Dec 2022. <https://wondery.com/shows/call-me-curious/episode/10424-is-there-a-way-to-keep-your-brain-young-and-healthy-as-you-age/>

“By imaging the brain, scientists can predict a person’s aptitude for training.” University of Illinois, News Bureau. 04-05 Dec 2019. *Science Magazine; Medical Xpress (Neuroscience); Global Health News Wire; Off the Wire; Brightsurf; Pharma Jobs (Biotech)*

“Brain structure size linked to fluid intelligence.” 04 Dec 2019. *Neuroscience News & Research from Technology Networks.*

“Study identifies brain regions that appear to play key role in fluid intelligence.” 04 Dec 2019. *Medical News* (news-medical.net).

PROFESSIONAL MEMBERSHIPS

International Society of Behavioral Neuroscience, since 2018

Cognitive Neuroscience Society, since 2013

Society for Neuroscience, since 2010