

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

PROFESSIONAL EXPERIENCE

- 2018-Present Assistant Professor, Wayne State University
Department of Psychology, Institute of Gerontology
- 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.

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 of Aging Research
Total Award: \$150,000
- 2016-24 (NCE) "Neural Correlates and Modifiers of Cognitive Aging" / 5R01AG011230-21A1
Institution: Wayne State University
Role: multi-PI (as of 6/17/2022)
Agency: NIH (NIA)
Total Award: \$3,608,744

- 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)
- 2018-23 “Community-Based Approach to Early Identification of Transitions to Mild Cognitive 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
- 2021-26 “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: Co-I Data Core & NeuroImaging Core
 Agency: NIH (NIA)
 Total Award: \$15,381,377
- 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
- 2022-24 “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
- 2021-23 (NCE) “The role of IL-18 and excitatory/inhibitory imbalances of top-down/bottom-up processes 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
- Completed*
- 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-HS-013819
 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
- 2020-21 “Student Success Through Evidence-Based Pedagogies (WSU-SSTEP)” / DUE-1524878
 Office for Teaching and Learning
 Role: Leader, Faculty Learning Community
 Agency: National Science Foundation (NSF)
 Stipend: \$5,000
- 2019-20 “Student Success Through Evidence-Based Pedagogies (WSU-SSTEP)” / DUE-1524878
 Office for Teaching and Learning

Role: Member, Faculty Learning Community
 Agency: National Science Foundation (NSF)
 Stipend: \$3,000

2012 “Careers in Aging Seminar”
 Institution: Wayne State University
 Agency: Association for Gerontology in Higher Education
 Total Award: \$200

PUBLICATIONS

Peer-Reviewed Research Articles (mentored student first-author name underlined)

- 2023 Takla T[†], Chargo A[†], **Daugherty AM***, Fritz N*. 2023. Cognitive contributors of backward walking in persons with multiple sclerosis. *Multiple Sclerosis International*. In press. (†co-first author; *co-senior author)
- 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).
- 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).
- 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)
- 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).
- 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).
- 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).
- 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).
- 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)
- 2022 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).

- 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).
- Delgorio PL, Hiscox LV, **Daugherty AM**, Sanjana F, McIlvain G, Pohlig RT, McGarry MDJ, Martens CR, Schwarb H, Johnson CL. 2022. Structure-function associations 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).
- Edwards E, **Daugherty AM**, & Fritz N. 2022. 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).
- 2021 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)
- 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)
- 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.semcdb.2021.03.002](https://doi.org/10.1016/j.semcdb.2021.03.002)
- 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)
- 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)
- Kairys A, **Daugherty AM**, Kavic V, Shair S, Persad C, Heidebrink J, Bhaumik A, Giordani B. 2021. Lap-top 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)
- 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)
- 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)
- 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 **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)
- 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)

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)

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.00000000000010868](https://doi.org/10.1212/WNL.00000000000010868)

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)

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)

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)

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)

Daugherty AM, Schwarb HD, McGarry MDJ, Johnson CL, Cohen NJ. 2020. Magnetic resonance elastography of human hippocampal subfields: CA3-dentate gyrus viscoelasticity predicts relational memory accuracy. *J Cog Neuro.* 32 (9): 1704-1713. [Epub 2020 July 31]. doi: [10.1162/jocn_a_01574](https://doi.org/10.1162/jocn_a_01574)

Rvuolo Grasser L, Burghardt P, **Daugherty AM**, Amisadri A, Javanbakht A. 2020. Inflammation and trauma-related psychopathology in Syrian and Iraqi refugees. *Behav Sci.* 10 (4): 75. [Epub 2020 Apr 7]. doi: [10.3390/bs10040075](https://doi.org/10.3390/bs10040075)

Rajesh A, **Daugherty AM**, Jain S, Henry D, Barbey AK, Rubin RD. 2020. Comorbid conditions differentiate rehabilitation profiles in traumatic versus non-traumatic brain injury: A retrospective analysis using a medical database. *J Head Trauma Rehabilitation.* 35 (6): E524-E534. [Epub 2020 May 27]. doi: [10/1097/HTR.0000000000000578](https://doi.org/10/1097/HTR.0000000000000578)

Rodrigue KM, **Daugherty AM**, Foster CM, Kennedy KM. 2020. Striatal iron accumulation is linked to reduced fronto-striatal brain function under working memory load. *NeuroImage.* 210: 116544. [Epub 2020 Jan 20]. doi: [10.1016/j.neuroimage.2020.116544](https://doi.org/10.1016/j.neuroimage.2020.116544)

Arble E, Steinert SW, **Daugherty AM**. 2020. The application of the Rorschach inkblot test in the study of neural and cognitive aging. *Rorschachiana.* 41: 1-18. [Epub 2020 Apr 29]. doi: [10.1027/1192-5604/a000120](https://doi.org/10.1027/1192-5604/a000120)

Daugherty AM, Sutton BP, Hillman CH, Kramer AF, Cohen NJ, Barbey AK. 2020. Individual differences in the neurobiology of fluid intelligence predict responsiveness to training: Evidence from a comprehensive cognitive, mindfulness meditation, and aerobic exercise intervention. *Trends Neurosci. Educ.* 18: 100123. [Epub 2019 Nov 5]. doi: [10.1016/j.tine.2019.100123](https://doi.org/10.1016/j.tine.2019.100123)

2019 Zwillig CE, **Daugherty AM**, Hillman CH, Kramer AF, Cohen NJ, Barbey AK. 2019. Enhanced decision-making through multimodal training. *NPJ Science of Learning.* 4: 11. [Epub 2019 Aug 5.] doi: [10.1038/s41539-019-0049-x](https://doi.org/10.1038/s41539-019-0049-x)

- Olsen R, Carr VA, **Daugherty AM**, La Joie R, Amaral RSC, Amunts K, ... Wisse LEM. 2019. Progress update from the Hippocampal Subfields Group. *Alzheimer's and Dementia: Diagnosis, Assessment, and Disease Monitoring*. 11: 439-449. [Epub 2019 Jun 13]. doi: [10.1016/j.dadm.2019.04.001](https://doi.org/10.1016/j.dadm.2019.04.001)
- Arble E, **Daugherty AM** *, Arnetz B. (* equal contribution to first author) 2019. Differential effects of physiological arousal following acute stress on police officer performance in a simulated critical incident. *Frontiers in Psychology, Psychology for Clinical Settings*. 10: 759. [Epub 2019 Apr 9]. doi: [10.3389/fpsyg.2019.00759](https://doi.org/10.3389/fpsyg.2019.00759)
- Daugherty AM**, Hoagey DA, Kennedy KM, Rodrigue KM. 2019. Genetic predisposition for inflammation exacerbates effects of striatal iron content on cognitive switching ability in healthy aging. *NeuroImage*. 185: 471-78. [Epub 2018 Oct 25]. doi: [10.1016/j.neuroimage.2018.10.064](https://doi.org/10.1016/j.neuroimage.2018.10.064)
- 2018 **Hect J, Daugherty AM**, Hermex KM, Marusak HA, Thomason ME. 2018. Developmental variation in regional brain iron and its relation to cognitive functions in childhood. *Dev Cog Neuro*. 34: 18-26. [Epub 2018 May 22]. doi: [10.1016/j.dcn.2018.05.004](https://doi.org/10.1016/j.dcn.2018.05.004)
- Arble E, **Daugherty AM**, Arnetz B. 2018. Models of first responder coping: Police officers as a unique population. *J Stress Health*. 34(5): 612-621. [Epub 2018 Jun 8]. doi: [10.1002/smi.2821](https://doi.org/10.1002/smi.2821)
- Daugherty AM**, Zwilling C, Paul EJ, Sherepa N, Allen C, Kramer AF, Hillman CH, Cohen NJ, Barbey AK. 2018. Multi-modal fitness and cognitive training to enhance fluid intelligence. *Intell*. 66: 32-43. [Epub 2017 Nov 20]. doi: [10.1016/j.intell.2017.11.001](https://doi.org/10.1016/j.intell.2017.11.001)
- Bender AR, Keresztes A, Bodammer NC, Shing YL, Werkle-Bergner M, **Daugherty AM**, Yu Q, Kühn S, Lindenberger U, Raz N. 2018. Optimization and validation of automated hippocampal subfield segmentation across the lifespan. *Hum Brain Mapp*. 39(2): 916-31. [Epub 2017 Nov 23]. doi: [10.1002/hbm.23891](https://doi.org/10.1002/hbm.23891)
- Raz N, **Daugherty AM**. 2018. Pathways to brain aging and their modifiers: Free-radical induced energetic and neural decline in senescence (FRIENDS) model. *Gerontology*. 64(1): 49-57. [Epub 2017 Sep 01]. doi: [10.1159/000479508](https://doi.org/10.1159/000479508)
- Yu Q, Daugherty AM**, Brush D, Hardwick A, Lacey W, Nishimaura M, Ofen N. 2018. Socioeconomic status and hippocampal volume in children and young adults. *Dev Sci*. 21 (3): e12561. [Epub 2017 May 2]. doi: [10.1111/desc.12561](https://doi.org/10.1111/desc.12561)
- 2017 **Daugherty AM**, Raz N. 2017. Incident risk and progression of cerebral microbleeds in healthy adults: A multi-occasion longitudinal study. *Neurobiol Aging*. 59: 22-29. [Epub 2017 Jul 18]. doi: [10.1016/j.neurobiolaging.2017.07.003](https://doi.org/10.1016/j.neurobiolaging.2017.07.003)
- Rajesh A**, Cooke G, Monti J, Jahn A, **Daugherty AM**, Cohen NJ, Kramer AF. 2017. Differences in brain architecture in remote mild traumatic brain injury. *J Neurotrauma*. 34 (23): 3280-87. [Epub 2017 Oct 27]. doi: [10.1089/neu.2017.5047](https://doi.org/10.1089/neu.2017.5047)
- Awick EA, Ehlers DK, Aguinaga S, **Daugherty AM**, Kramer AF, McAuley E. 2017. Effects of a randomized exercise trial on physical activity, psychological distress and quality of life in older adults. *Gen Hosp Psychiatry*. 49:44-50. [Epub 2017 Jun 15]. doi: [10.1016/j.genhosppsy.2017.06.005](https://doi.org/10.1016/j.genhosppsy.2017.06.005)
- Schwarb H, Johnson CL, **Daugherty AM**, Hillman CH, Kramer AF, Cohen NJ, Barbey AK. 2017. Aerobic fitness, hippocampal viscoelasticity, and relational memory performance. *NeuroImage*. 153: 179-188. [Epub 2017 Mar 30]. doi: [10.1016/j.neuroimage.2017.03.061](https://doi.org/10.1016/j.neuroimage.2017.03.061)
- Ehlers DK, **Daugherty AM**, Fanning J, Awick EA, Burzynska A, Chaddock-Heyman L, Kramer AF, McAuley E. 2017. Regional brain volumes moderate, but do not mediate, the effects of group-based exercise training on reductions in loneliness in older adults. *Front Aging Neurosci*. 9: 110 [Epub 2017 Apr 25]. doi: [10.3389/fnagi.2017.00110](https://doi.org/10.3389/fnagi.2017.00110)

- Banducci SE, Daugherty AM, Biggan JR, Cooke GE, Voss M, Noice T, Noice H, Kramer AF.** 2017. Active experiencing training improves episodic memory recall in older adults. *Front Aging Neurosci.* 9: 133. [Epub 2017 Apr 20]. [doi: 10.3389/fnagi.2017.00133](https://doi.org/10.3389/fnagi.2017.00133)
- Daugherty AM, Flinn RW, Ofen N.** 2017. Hippocampal CA3-dentate gyrus volume uniquely linked to improvement in associative memory from childhood to adulthood. *NeuroImage.* 153: 75-85. [Epub 2017 Mar 22]. [doi: 10.1016/j.neuroimage.2017.03.047](https://doi.org/10.1016/j.neuroimage.2017.03.047)
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- 2016 **Daugherty AM, Bender AR, Raz N, Ofen N.** 2016. Age differences in hippocampal subfield volumes from childhood to late adulthood. *Hipp* 26 (2): 220-8. [Epub 2015 Sep 4]. [doi: 10.1002/hipo.22517](https://doi.org/10.1002/hipo.22517)
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- 2015 **Daugherty AM, Raz N.** 2015. Appraising the role of iron in brain aging and cognition: Promises and limitations of MRI methods. *Neuropsychol Rev* 25 (3): 272-87. [Epub 2015 Aug 7]. [doi: 10.1007/s11065-015-9292-y](https://doi.org/10.1007/s11065-015-9292-y)
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- Raz N, **Daugherty AM**, Bender AR, Dahle CL, Land S. 2015. Volume of the hippocampal subfields in healthy adults: Differential associations with age and a pro-inflammatory genetic variant. *Brain Struct Funct*. 220 (5): 2663-74. [Epub 2014 Jun 20]. doi: [10.1007/s00429-014-0817-6](https://doi.org/10.1007/s00429-014-0817-6).
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- 2013 Bender AR, **Daugherty AM**, Raz N. 2013. Vascular risk moderates associations between hippocampal subfield volumes and memory. *J Cogn Neuro*. 25 (11): 1851-62. [Epub 2013 Jun 14]. doi: [10.1162/jocn_a_00435](https://doi.org/10.1162/jocn_a_00435).
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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

- Homayouni R, Canada KL, Saifullah S, Foster D'J, Thill C, **Daugherty AM***, Ofen N*. Age-related differences in hippocampal subfield volumes across the human lifespan: A meta-analysis. In revision. (*co-senior author)
- Homayouni R, Yu Q, **Daugherty AM**, Raz N, Ofen N. KIBRA single nucleotide polymorphism is associated with hippocampal subfield volumes and cognition across development. In revision.
- Kero K, Woodard JL, Giordani B, **Daugherty AM**, Shair S, Hanna S, DiCerbo LM, Kavic V. Metacognition in community-dwelling older Black and African American adults during the COVID-19 pandemic. In revision.
- Chargo AN, Dahle CL, Raz N, **Daugherty AM**. Age- and sex-related differences in cognitive map recall following a spatial navigation task. Under review.
- Wuestefeld A, Baumeister H, Adaams 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, Marco-sRabal 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. Comparison of histological delineations of medial temporal lobe cortices by four independent neuroanatomy laboratories. Under review.
- Arble EA, Steinert SW, Shankar S, Harris A, Cerjanic A, Sutton BP, **Daugherty AM**. Ideational Slippage in Middle-Aged and Older Adults: A Preliminary MRI Study. Under review.
- Yu Q, **Daugherty AM**, Ofen N. Developmental age differences in memory are specific to mnemonic content, not test delay. Under review.

PROFESSIONAL RESEARCH PRESENTATION

Invited Talks

- 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)

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

- Halter CM, Moll AC, Kero K, Hanna S, DiCerbo LM, Woodard JL, Giordani B, **Daugherty AM**, Kavic 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, Kavic 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**, Kavic 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
- FA 2020, 21, 22 Psychology of Perception: Fundamental Processes (undergraduate seminar)
Instructor, Independent Lecture
Department of Psychology, Wayne State University, Detroit, MI
- WI 2018, 19, 20, 21, 22, 23 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
- 2008-09 Introductory Psychology, Laboratory Section (undergraduate)
Instructor, Lecture and Laboratory
Psychology Department, Wayne State University, Detroit MI

Contributing Lecturer

- 2019-present Fundamentals of Neuropsychiatric Disorders (graduate seminar)
Contributing Instructor, topics in cognitive assessment and dementia
Department of Psychiatry, Wayne State University, Detroit, MI
- 2018-present Fundamentals of Neuroimaging (graduate seminar)
Contributing Instructor, topics in aging
Department of Psychiatry, Wayne State University, Detroit, MI

Seminar / Workshop

- 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

MENTORING STUDENTS

Post-Doctoral Fellow Research Supervision

2021-present Kelsey Canada, PhD, Institute of Gerontology, Wayne State University (Co-mentor)

Graduate Student Research Supervision

2021-present Christine Lee, Psychiatry (Translational Neuroscience), Wayne State University
Alexis (Campbell) Chargo, Psychology, Wayne State University
Candace Ryan, Nursing, Wayne State University (Co-mentor)

2020-present Roya Homayouni, Psychology, Wayne State University (Co-mentor)

Doctoral Thesis Chair

2023-present Candace Ryan, Nursing (Co-chair)

2022-present Roya Homayouni, Psychology (Co-chair)

2019-2021 Qijing Yu, Psychology (Co-chair)

Qualifying Exam Chair

2022 Candace Ryan, Nursing (Co-chair)

2021-22 Roya Homayouni, Psychology (Co-chair)

Graduate Student Mentoring Committees

2023-present Jecenia Duran, Psychology, Wayne State Univ.
Parisa Vahidi, Psychology, Institute of Gerontology, Wayne State Univ.

2022-present Bradley Dixon, Institute of Gerontology, Wayne State Univ.
Taylor Takla, Psychiatry (Translational Neuroscience), Wayne State Univ.

2021-present Allison Moll, Institute of Gerontology, Wayne State Univ.
Qin Yin, Institute of Gerontology, Wayne State Univ.
Rachel Scott, Psychology, Inst. of Gerontology, Wayne State Univ.

2018-present Roya Homayouni, Psychology, Inst. of Gerontology, Wayne State Univ.

2018-2020 Erika Squires, Comm. Sci. Disord., Inst. of Gerontology, Wayne State Univ.

2018-2021 Qijing Yu, Psychology, Inst. of Gerontology, Wayne State Univ.

Graduate Student Thesis and Qualifying Exam Committees

2023-present Colt Halter (MA), Psychology, Wayne State Univ.

2022-present Brian Timmerman (PhD), Psychology, Wayne State Univ.
Bradley Dixon (MA), Department of Psychology, Wayne State Univ.
Velinka Morton (PhD), Psychology, Wayne State Univ.
Alixandria Trombley (PhD), Psychiatry (Translational Neuroscience), Wayne State Univ.

2021-present Youjin Jung (PhD), Psychology, Wayne Sate Univ.
Qin Yin (PhD), Psychology, Wayne State Univ.
Allison Moll (PhD), Psychology, Wayne State Univ.
Sean Sethi (PhD), Biomedical Engineering, Wayne State Univ.
Rachel Golaszewski (PhD), Nutrition & Food Science, Wayne State Univ.

2022-2023 Jordan Skully (Qual.), Psychology, Wayne State University

2021-2022 Youjin Jung (Qual.), Psychology, Wayne Sate Univ.
Rachel Golaszewski (Qual.), Nutrition & Food Science, Wayne State Univ.
Velinka Morton (MA), Psychology, Wayne State Univ.
Alixandria Trombley (Quals.), Psychiatry (Translational Neuroscience), Wayne State Univ.

2019-2022 Nicole Zabik (PhD), Psychiatry (Translational Neuroscience), Wayne State Univ.

2020-2021 Jordan Skully (MA), Psychology, Wayne State Univ.
Allison Moll (MA), Psychology, Wayne State Univ.
Qin Yin (Qual.), Psychology, Wayne State Univ.
Matthew Jennings (MA), Psychology, Wayne State Univ.

2019-2021 Erin Edwards (PhD), Psychiatry (Translational Neuroscience), Wayne State Univ.

- 2018-2020 Royya Homayouni (MA), Psychology, Wayne State Univ.
Raymond Viviano (PhD), Psychology, Wayne State Univ.
Jonathan Lynn (MA), Psychiatry (Translational Neuroscience), Wayne State Univ.
Lara Fahmy (Qual.), Psychiatry (Translational Neuroscience), Wayne State Univ.
Aishwarya Balasubramaniyan (PhD), Psychology, Univ. of Illinois Urbana-Champaign
- 2018-2019 Erin Edwards (Qual.), Psychiatry (Translational Neuroscience), Wayne State Univ.
Nicole Zabik (Qual.), Psychiatry (Translational Neuroscience), Wayne State Univ.
Raymond Viviano (Qual.), Psychology, Wayne State Univ.

Mentored External Fellowship Awards

Funded

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: 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: Mentoring Team

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: Mentoring Team

Submitted

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

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*

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

2018-2023 Member, Magnetic Resonance Research Facility (MRRF) Pilot Project Review Committee

2018-present Faculty, Research Design and Analysis Consulting (RDA)

- 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

- 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 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

- 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

- 2021 Hippocampal Subfield Measurement: Development of a Dementia Risk Assessment Tool.
Sept 21, 2021. Institute of Gerontology Board of Visitors.
- 2021 Lifestyle Strategies to Promote Cognitive Health. June 15, 2021. Healthy Black Elders,
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, 2022 Detroit Alzheimer's Awareness Walk (Alzheimer's Association)
- 2020 Coach, Detroit Heartwalk (American Heart Association)

MEDIA APPEARANCES AND RESEARCH COVERAGE

- "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