

Hernan, A Curriculum Vitae

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Amanda E. Hernan, PhD

Office Address:

Nemours Biomedical Research
200 Powder Mill Road,
DuPont Experimental Station,
E400 building, room 4402 (office)/4224 (lab)
Wilmington, DE 19803
(302) 651-6814
Amanda.Hernan@Nemours.org

Education:

2003-2007 BS Case Western Reserve University (Biology)
2003-2007 BA Case Western Reserve University (Psychology)
2007-2013 PhD Dartmouth College (Experimental and Molecular Medicine-Neuroscience)

Postgraduate Training and Fellowship Appointments:

2013-2019 Postdoctoral Associate Researcher, Larner College of Medicine, University of Vermont, Burlington, VT

Faculty Appointments:

2019-2021 Tenure Pathway Assistant Professor in Neurological Sciences, Larner College of Medicine, University of Vermont

2021-2025 Affiliated Assistant Professor in Psychological and Brain Sciences, College of Arts and Sciences, University of Delaware

2021-2026 Research Scientist/Head of the Dynamics in Epilepsy and Cognitive Development Lab, Division of Neuroscience, Nemours Children's Health

2025-present Affiliated Associate Professor in Psychological and Brain Sciences, College of Arts and Sciences, University of Delaware

2026-present Research Associate Professor in Pediatrics, Sidney Kimmel Medical College, Thomas Jefferson University

2026-present Senior Research Scientist/Head of the Dynamics in Epilepsy and Cognitive Development Lab, Division of Neuroscience, Nemours Children's Health

Specialty Certification:

SYNERGY Certificate Program in Clinical and Translational Research Methods, The Dartmouth Clinical and Translational Science Institute, Hanover, NH (2012)

Awards, Honors and Membership in Honorary Societies

Year	Name of Award
2006	Howard Hughes Baccalaureate Fellow
2005-2007	Dean's High Honors, Case Western Reserve University
2011	Graduate Travel Awardee, Dartmouth College
2016	American Epilepsy Society Postdoctoral Fellow
2017	NIH NINDS K22 Transition to Independence Award
2018	Gordon Research Seminar Chair
2020	LCOM Gender Equity in Medicine and Science Rising Star Nominee
2020	NIH NINDS Curing the Epilepsies 2021 Conference Travel Awardee
2021	Citizens United for Research in Epilepsy Continuity Funding Awardee
2021	Director of Research, Neurology Division of Nemours Children's Health
2025	Co-Director of the Neuroscience Research Center at Nemours
2026	Gordon Research Conference Discussion Leader

Memberships in Professional and Scientific Societies:

2006-	Society for Neuroscience (member)
2010-	American Epilepsy Society (member)
2013-	F1000 Prime Associate Faculty Member (member)
2013-	500 Women Scientists (member)
2016-	International League Against Epilepsy: Young Epilepsy Section (member)
2019-	Association for Women in Science (member)

Professional and Scientific Committees

2020	NIH LRP study section
2022	Delaware Neuroscience Symposium committee
2023	DE INBRE Research Development Committee
2024	NIH RCMI Awards study section
2024	Nemours APPLE award review panel
2024	DE INBRE Research Development Committee
2024	NIH ZRG1 NV-S(14) study section
2024	American Epilepsy Society Basic Science Committee
2025	NIH ZRG1 NV-S(14) study section
2025	NIH CN(02) panel study section
2025	DE ACCEL CTR Pilot Grant review panel
2025	American Epilepsy Society Basic Science Committee
2026	NIH CN(02) panel study section

Editorial Positions

Ad hoc reviewer:

2010, 2013 Journal of Neuroscience
2018- Neuropharmacology
2016- PLoS One
2015- Pharmaceuticals, Brain Sciences, Antioxidants, Molecules,
 Biomedicines, International Journal of Molecular Sciences
2014- Brain and Development
2012- Naunyn-Schmiedeberg's Archives of Pharmacology
2011- Epilepsy and Behavior
2020- Journal of Central Nervous System Disease
2020- Nature Communications
2021- Psychoneuroendocrinology

Editorial board:

2021- Frontiers in Neurology, Review Editor
2022- Frontiers in Neuropharmacology, Review Editor

Academic Committees

2022- Institutional Biosafety Committee, Nemours Children's Health
 (Associate Chair)
2022- Institutional Animal Care and Use Committee, Nemours Children's Health
 (Voting Member)
2025- Policy Committee, Nemours Children's Health
 (Alternate Member)
2026- Promotions Committee, Sidney Kimmel Medical College TJU
 (Member)

Major Teaching Responsibilities

Interdisciplinary Neuroscience Graduate Program Faculty Mentor, Nemours/University of Delaware (2021-)
Behavioral Neuroscience Graduate Faculty Mentor, Nemours/University of Delaware (2021-)
Summer Opportunities for Undergraduate Research and Creative Endeavors Mentor, University of Delaware/Nemours (2022-)
Neuroscience Summer Research Fellowship Mentor, Nemours Children's Health (2022-)
University of Delaware/Nemours BRIDGE Scholar Mentor (2023-)
Co-instructor, Translational Neuroscience, UD BISC667 (Fall 2024)
Biomedical Engineering Graduate Program Faculty Mentor, Nemours/University of Delaware (2025-)
Guest lecturer, Nemours Neurology Resident Lecture Series (Fall 2024, Fall 2025)

Ongoing Research Support

2024-2029 NIH NINDS 1R01NS134491-01 (\$1.9M)
 Role: PI
 Title: Leveraging genetically-encoded heterogeneity to understand TANDs and seizures in novel models of TSC
2025-2030 NIH Directors Transformative Research R01 (\$2.4M)
 Role: Co-I (PI: Rod Scott)

Title: Restoring cognitive function through precision neurostimulation: A disease-agnostic approach based on convergent hippocampal dynamics.

2025-2027 DE ACCEL CTR Interdisciplinary New Collaborations Award (\$100,000)

Role: mPI (mPI: Austin Brockmeier)

Title: Uncovering Hidden EEG Biomarkers of Epilepsy Using Machine Learning

Pending Research Support

2026-2031 NIH R01

Role: Co-I

Title: Targeted medial septum stimulation to restore neural circuit dynamics transcriptomic profiles, and improve cognitive function in Fragile X syndrome: A systems neuroscience approach

Completed Research Support

2024-2025 NIH NIGMS Delaware State University COBRE Phase III-Delaware Center for Neuroscience Research (\$300,000)

Role: mPI (administrative supplement)

Title: Functions of Na,K-ATPase beta 1-subunit in cerebellar development and neurodevelopmental disorders

6/2024-11/2024 NIH DE-CTR ACCEL Shovel Ready Grant Mechanism (\$40,000)

Role: Project PI

Title: Leveraging genetic diversity to identify astrocytic modifiers of TSC phenotypes.

2022-2024 NIH NIGMS DE INBRE Pilot Award (\$120,000)

Role: PI

Title: A role for astrocytes in treatment of cognitive deficits after early life seizure

2019-2022 NIH NINDS K22NS104230-04 (Phase II; \$256,537 per year)

Role: PI

Title: Mechanisms for Improving Cognitive Outcome in Pediatric Epilepsy with ACTH

2020-2022 Citizens United for Research in Epilepsy, Epilepsy Research Continuity Fund Award, (\$15,000)

Role: PI

2020-2022 NIH NIGMS P30GM118228-05S1 (\$390,000)

Role: Co-I

Title: Vermont Immunobiology / Infectious Diseases Center: Alzheimer's-focused administrative supplement

2017-2019 NIH NINDS K22NS104230-02 (Phase I; \$104,554 per year)

Role: PI

Title: Mechanisms for Improving Cognitive Outcome in Pediatric Epilepsy with ACTH

2020-2020 Mallinkrodt Pharmaceuticals Investigator-Initiated Award (\$511,798)

Role: Co-I

Title: Genetic and Neural Dynamic Mechanisms of Cognitive Improvement with Acthar Gel After Early Life Seizures

Organizing Roles in Scientific Meetings

2016-2018 Co-Chair/Organizer, Gordon Research Seminar: Mechanisms of Epilepsy and Neuronal Synchronization, Barcelona, Spain

2024 Chair of the Women in Epilepsy Panel, American Epilepsy Society Annual Meeting, Los Angeles, USA
 2026 Discussion Leader- Neuronal Oscillations and Synchrony Session. Gordon Research Conference: Mechanisms of Epilepsy and Neuronal Synchronization, Barcelona, Spain

Lectures by Invitation:

Local

2021	Nemours Children’s Healthcare Research Seminar, Asynchrony to Astrocytes: therapeutic strategies for cognitive dysfunction in pediatric epilepsy	Wilmington, DE
2022	INBRE Junior Investigators Network, Asynchrony to Astrocytes: therapeutic strategies for cognitive dysfunction in pediatric epilepsy	Wilmington, DE
2022	Nemours Research Retreat, Dynamics in Epilepsy and Cognitive Development Group	Wilmington, DE
2022	Behavioral Neuroscience Seminar, Asynchrony to Astrocytes: therapeutic strategies for cognitive dysfunction in pediatric epilepsy	Newark, DE
2022	Thomas Jefferson University/Nemours Research Symposium, Astrocyte – Neuronal Interactions in Epilepsy	Wilmington, DE
2022	Interdisciplinary Neuroscience Graduate Program, Asynchrony to Astrocytes: Exploring novel therapeutic strategies for cognitive impairments in epilepsy	Newark, DE
2023	Nemours Research Week, Asynchrony to Astrocytes: Exploring novel therapeutic strategies for cognitive impairments in epilepsy	Wilmington, DE
2023	OSCAR Seminar Series at Delaware State University Invited Speaker, Asynchrony to Astrocytes: Exploring novel therapeutic strategies for cognitive impairments in epilepsy	Dover, DE
2023	INBRE Junior Investigators Network, Astrocyte dysregulation after early life seizures: a novel therapeutic target for cognitive impairment in epilepsy?	Wilmington, DE
2023	Behavioral Neuroscience Seminar, Dynamics in Epilepsy and Cognitive Development	Newark, DE
2024	Thomas Jefferson University/Nemours Research Symposium, Dynamics in Epilepsy and Cognitive Development	Wilmington, DE
2024	Behavioral Neuroscience Seminar, Dynamics in Epilepsy and Cognitive Development	Newark, DE
2025	Nemours Research Week, Network Abnormalities Underlying Cognitive Impairment in Epilepsy	Wilmington, DE
2026	Interdisciplinary Neuroscience Graduate Symposium,	Newark, DE

	DECODE-ing Epileptic Network Mechanisms: Functional Diversity as a Window into Network Dynamics	
2026	Nemours Research Week, The Future of Neuroscience Research Panel Discussion	Wilmington, DE

National

2012	International Epilepsy Symposium, "Epileptiform Activity in the Prefrontal Cortex During Development: Plasticity and Behavioral Alterations."	Lebanon, NH
2013	Neurology Special Donor Seminar, "What Do Interictal Spikes Do to the Developing Brain?"	Lebanon, NH
2015	Neuroscience, Behavior and Health Forum, "The Role of ACTH in Preventing Cognitive Deficit in Rodent Models of Pediatric Epilepsy."	Burlington, VT
2015	Neurological Sciences Grand Rounds, UVM College of Medicine, "Improving Cognitive Outcomes in Pediatric Epilepsy."	Burlington, VT
2016	UVM Basic Science Lecture Series, "The Role of Melanocortins in Improving Cognitive Outcome in Pediatric Epilepsy."	Burlington, VT
2016	Northern New England Neurological Society, "New Approaches to Improving Cognitive Outcome in Epilepsy."	Essex Junction, VT
2018	UVM Larner College of Medicine Research Showcase Selected Speaker, "National Firing Dynamics in a Model of Malformation of Cortical Development."	Burlington, VT
2018	American Association for Laboratory Animal Science, "Towards a Treatment for Cognitive Deficits in Epilepsy."	Burlington, VT
2018	Department of Biological Sciences Seminar at Kent State University, "Toward a treatment for neuropsychiatric comorbidities in epilepsy: Melanocortin peptides, neural dynamics and cognition"	Kent, OH
2019	Psychology Department Seminar at University of Illinois, "Neural Network Mechanisms of Behavioral Impairment in Epilepsy."	Urbana, IL

2019	Biology and Biotechnology Seminar at Worcester Polytechnic Institute, "Neural Network Mechanisms of Behavioral Impairment in Epilepsy."	Worcester, MA
2019	Neurological Sciences Research Retreat, "Melanocortin Peptides as Novel Therapeutic Targets for Behavioral Impairments in Epilepsy."	Burlington, VT
2019	Comparative Biosciences Seminar at University of Illinois, "Neural Network Mechanisms of Behavioral Impairment in Epilepsy."	Urbana, IL
2019	American Epilepsy Society, Basic Science Skills Workshop, Chronic In Vivo Recording: Single Unit to iEEG	Baltimore, MD
2020	Neuroscience, Behavior and Health Forum, "Asynchrony, Astrocytes and ACTH"	Burlington, VT
2026	Merrit-Putnam Symposium, American Epilepsy Society Meeting "Network Perspectives on Cognitive Impairment and Developmental Delay in Epilepsy"	Denver, CO

International

2012	National Center for Young People with Epilepsy, "Altered Short-term Plasticity and Excitation in the Prefrontal Cortex After Early Life Seizures."	East Grinstead, UK
2013	National Center for Young People with Epilepsy, "The Cognitive Impact of Frequent Epileptic Discharges During Development on the Prefrontal Cortex."	East Grinstead, UK
2015	National Center for Young People with Epilepsy, "The Role of ACTH in Improving Cognitive Outcomes."	East Grinstead, UK
2015	National Center for Young People with Epilepsy, "Aetiology in Pediatric Epilepsy."	East Grinstead, UK
2016	National Center for Young People with Epilepsy, "Hippocampal-prefrontal Network Abnormalities in MCD."	East Grinstead, UK

Publications, peer reviewed:

Kleen JK, Sesqué A, Wu EX, Miller FA, **Hernan AE**, Holmes GL, Scott RC Early-life seizures produce lasting alterations in the structure and function of the prefrontal cortex. *Epilepsy Behav.* 2011 Oct;22(2):214-9. doi: 10.1016/j.yebeh.2011.07.022. Epub 2011 Aug 27. PubMed PMID: 21873119; PubMed Central PMCID: PMC3185212.

Isaeva E, **Hernan AE**, Isaev D, Holmes GL Thrombin facilitates seizures through activation of persistent sodium current. *Ann Neurol.* 2012 Aug;72(2):192-8. doi: 10.1002/ana.23587. PubMed PMID: 22926852; PubMed Central PMCID: PMC3430976.

Hernan AE, Holmes GL, Isaev D, Scott RC, Isaeva E Altered short-term plasticity in the prefrontal cortex after early life seizures. *Neurobiol Dis.* 2013 Feb;50:120-6. doi: 10.1016/j.nbd.2012.10.007. *Epub 2012 Oct 12.* PubMed PMID: 23064435; PubMed Central PMCID: PMC3534893.

Hernan AE, Alexander A, Lenck-Santini PP, Scott RC, Holmes GL Attention deficit associated with early life interictal spikes in a rat model is improved with ACTH. *PLoS One.* 2014;9(2):e89812. doi: 10.1371/journal.pone.0089812. *eCollection 2014.* PubMed PMID: 24587054; PubMed Central PMCID: PMC3933669.

Hernan AE, Alexander A, Jenks KR, Barry J, Lenck-Santini PP, Isaeva E, Holmes GL, Scott RC Focal epileptiform activity in the prefrontal cortex is associated with long-term attention and sociability deficits. *Neurobiol Dis.* 2014 Mar;63:25-34. doi: 10.1016/j.nbd.2013.11.012. *Epub 2013 Nov 19.* PubMed PMID: 24269731; PubMed Central PMCID: PMC4397918.

Pehek EA, **Hernan AE** Stimulation of glutamate receptors in the ventral tegmental area is necessary for serotonin-2 receptor-induced increases in mesocortical dopamine release. *Neuroscience.* 2015 Apr 2;290:159-64. doi: 10.1016/j.neuroscience.2015.01.029. *Epub 2015 Jan 28.* PubMed PMID: 25637799; PubMed Central PMCID: PMC5329887.

Holmes GL, Tian C, **Hernan AE**, Flynn S, Camp D, Barry J Alterations in sociability and functional brain connectivity caused by early-life seizures are prevented by bumetanide. *Neurobiol Dis.* 2015 May;77:204-19. doi: 10.1016/j.nbd.2015.02.015. *Epub 2015 Mar 10.* PubMed PMID: 25766676; PubMed Central PMCID: PMC4682568.

Mahoney JM, Titiz AS, **Hernan AE**, Scott RC Short-Range Temporal Interactions in Sleep; Hippocampal Spike Avalanches Support a Large Milieu of Sequential Activity Including Replay. *PLoS One.* 2016;11(2):e0147708. doi: 10.1371/journal.pone.0147708. *eCollection 2016.* PubMed PMID: 26866597; PubMed Central PMCID: PMC4750866.

Hernan AE, Holmes GL Antiepileptic drug treatment strategies in neonatal epilepsy. *Prog Brain Res.* 2016;226:179-93. doi: 10.1016/bs.pbr.2016.03.011. *Epub 2016 Apr 20. Review.* PubMed PMID: 27323943.

Massey AT, Lerner DK, Holmes GL, Scott RC, **Hernan AE** ACTH Prevents Deficits in Fear Extinction Associated with Early Life Seizures. *Front Neurol.* 2016;7:65. doi: 10.3389/fneur.2016.00065. *eCollection 2016.* PubMed PMID: 27199888; PubMed Central PMCID: PMC4852169.

Hernan AE, Schevon CA, Worrell GA, Galanopoulou AS, Kahane P, de Curtis M, Ikeda A, Quilichini P, Williamson A, Garcia-Cairasco N, Scott RC, Timofeev I Methodological standards and functional correlates of depth in vivo electrophysiological recordings in control rodents. A TASK1-WG3 report of the AES/ILAE Translational Task Force of the ILAE. *Epilepsia.* 2017 Nov;58 Suppl 4(Suppl 4):28-39. doi: 10.1111/epi.13905. PubMed PMID: 29105069; PubMed Central PMCID: PMC5679263.

Hernan AE, Mahoney JM, Curry W, Richard G, Lucas MM, Massey A, Holmes GL, Scott RC Environmental enrichment normalizes hippocampal timing coding in a malformed hippocampus. *PLoS One.* 2018;13(2):e0191488. doi: 10.1371/journal.pone.0191488. *eCollection 2018.* PubMed PMID: 29394267; PubMed Central PMCID: PMC5796690.

Hernan AE, Mahoney JM, Curry W, Mawe S, Scott RC Fine Spike Timing in Hippocampal-Prefrontal Ensembles Predicts Poor Encoding and Underlies Behavioral Performance in Healthy and Malformed Brains. *Cereb Cortex*. 2021 Jan 1;31(1):147-158. doi: 10.1093/cercor/bhaa216. PubMed PMID: 32860415; PubMed Central PMCID: PMC7727336.

Khalife MR, Scott RC, **Hernan AE** Mechanisms for Cognitive Impairment in Epilepsy: Moving Beyond Seizures. *Front Neurol*. 2022;13:878991. doi: 10.3389/fneur.2022.878991. *eCollection 2022. Review*. PubMed PMID: 35645970; PubMed Central PMCID: PMC9135108.

Brabec JL, Ouardouz M, Mahoney JM, Scott RC, **Hernan AE** Differential regulation of gene expression pathways with dexamethasone and ACTH after early life seizures. *Neurobiol Dis*. 2022 Nov;174:105873. doi: 10.1016/j.nbd.2022.105873. *Epub 2022 Sep 21*. PubMed PMID: 36152945; PubMed Central PMCID: PMC10048589.

Lara MK, Brabec JL, **Hernan AE**, Scott RC, Tyler AL, Mahoney JM Network-based analysis predicts interacting genetic modifiers from a meta-mapping study of spike-wave discharge in mice. *Genes Brain Behav*. 2024 Apr;23(2):e12879. doi: 10.1111/gbb.12879. PubMed PMID: 38444174; PubMed Central PMCID: PMC10915378.

Chari A, **Hernan AE**, Mahoney JM, Thornton R, Tahir MZ, Tisdall MM, Scott RC Single unit-derived connectivity networks in tuberous sclerosis complex reveal propensity for network hypersynchrony driven by tuber-tuber interactions. *Sci Rep*. 2024 Dec 30;14(1):31654. doi: 10.1038/s41598-024-80634-5. PubMed PMID: 39738230; PubMed Central PMCID: PMC11686100.

Khalife MR, Villarin C, Ruiz JM, McClelland SA, Rabbo KA, Matthew Mahoney J, Scott RC, **Hernan AE** Melanocortin 4 Receptor-Dependent Mechanism of ACTH in Preventing Anxiety-Like Behaviors and Normalizing Astrocyte Proteins after Early Life Seizures. *eNeuro*. 2025 Mar;12(3). doi: 10.1523/ENEURO.0564-24.2025. *Print 2025 Mar*. PubMed PMID: 40015967; PubMed Central PMCID: PMC11897861.

Ouardouz M, Jasinski P, Khalife M, Mahoney JM, **Hernan AE**, Scott RC. Hippocampal-prefrontal functional neural networks in a rat model of fragile X syndrome are poorly organized with limited resiliency. *Sci Rep*. 2025 May 8;15(1):16089. doi: 10.1038/s41598-025-99408-8. PubMed PMID: 40341845; PubMed Central PMCID: PMC12062414.

Durante G, Scott RC, **Hernan AE**, Mahoney JM. Meta-analysis of genetic mapping studies in mice reveals candidate epilepsy modifier genes that are outside the current drug development landscape. 2025. In press. *Epilepsia*. doi.org/10.1111/epi.70035

Ouardouz M, Khalife MR, JM Mahoney, **Hernan AE**, Scott RC. Stimulation of the Medial Septum Diagonal Band of Broca Rescues Learning and Memory Deficits in FMR1 KO Mice. 2026. In press *iScience*.

Cano Achuri MI, Kay Lara M, Abed Rabbo K, Wilson BT, Meek A, Mahoney JM, **Hernan AE**, Brockmeier A. Interpretable EEG Biomarkers for Neurological Disease Models in Mice Using Bag-of-Waves Classifiers. 2026. Accepted. *Journal of Neural Engineering*.

Ouardouz MO, **Hernan AE**, Mahoney JM, Scott RC. Sensory audio stimulation rescues cognitive deficit in Fmr1-KO mice. 2026. Accepted. *Brain Sciences*.

Hubbard J, **Hernan AE**, Scott RC, Haut C. Evaluation of Depression in Pediatric Epilepsy Patients in the Epilepsy Monitoring Unit. Under Second Review *Epilepsy & Behavior Reports*.

Khalife MR, Jasinski P, Rabbo KA, Ouardouz M, Mahoney JM, Scott RC, **Hernan AE**. Normalization of Prefrontal Network Dynamics Prevents Cognitive Impairments After Developmental Insult. 2026. Under Second Review *Communications Biology*.

Abstracts:

2006 *The Effects of Stress on Rat Prefrontal Cortex Function and Neurochemistry: Serotonin-Dopamine Interactions.*

SOURCE Poster Symposium. Case Western Reserve University. Cleveland, OH.

2007 *Subcellular Localization of Glutaredoxin2.*

Biology Poster Symposium. Case Western Reserve University. Cleveland, OH.

2007 *Serotonin-2A receptor regulation of mesocortical dopamine release in the rat: mediation by AMPA receptors.*

Society for Neuroscience. San Diego, CA.

2008 *Amyotrophic Lateral Sclerosis: Does the Tetanus Vaccine Alter Pathogenesis of the Disease in a Rat Model?*

Dartmouth Neuroscience Day. Lebanon, NH.

2010 *Increased Short-Term Synaptic Plasticity After Early Life Seizures.*

Mechanisms of Epilepsy and Neuronal Synchronization Gordon Conference. Waterville, ME.

2010 *Increased Short-Term Synaptic Plasticity After Early Life Seizures.*

American Epilepsy Society. San Antonio, TX.

2011 *Early Life Seizures Cause Altered Short-Term Synaptic Plasticity.*

Dartmouth Neuroscience Day. Lebanon, NH.

2011 *Alterations in Short-Term Synaptic Plasticity After Early Life Seizures.*

Society for Neuroscience. Washington, DC.

2012 *The Effect of Epileptiform Activity in the Prefrontal Cortex During Development.*

Dartmouth Neuroscience Day. Hanover, NH.

2012 *Epileptiform Activity in the Prefrontal Cortex During Development: Plasticity and Behavioral Alterations.*

Program in Experimental and Molecular Medicine Retreat. Fairlee, VT.

2012 *The Effect of Focal Interictal Spikes During Development on Short-Term Plasticity and Cognition.*

American Epilepsy Society. San Diego, CA.

2013 *The Effect of Focal Interictal Spikes During Development.*

Society for Neuroscience. San Diego, CA.

2014 *Environmental enrichment improves hippocampal networks in animals with malformations of cortical development.*

Society for Neuroscience. Washington, DC.

2015 *The role of ACTH in improving cognitive outcomes in rodent models.*

Neurobiology of Epilepsy: From Genes to Networks Symposium. Montreal, QC, Canada.

2016 *Hippocampal and Prefrontal Timing Coding and Cognition in a Malformed Brain.*

Gordon Research Seminar and Gordon Research Conference. Girona, Spain.

2018 *Hippocampal and Prefrontal Timing Coding and Cognition in a Malformed Brain.*

Gordon Research Seminar and Gordon Research Conference. West Dover, VT.

2021 *Administration of ACTH Prevents Development of Cognitive Deficits in Early Life Seizure Model.*

Gordon Research Seminar and Gordon Research Conference. West Dover, VT.

2021 *Distributed dynamic coding for spatial working memory in hippocampal-prefrontal networks.*

Society for Neuroscience. Chicago, IL.

2021 *MC4Rs Facilitate ACTH-associated Neuroprotection of Prefrontal Cognition in a Mouse Model of Recurrent Early Life Seizures.*
American Epilepsy Society. Chicago, IL.

2021 *Tuning hippocampal dynamics with optogenetic MSDB stimulation.*
Brain Stimulation. Charleston, SC.

2022 *Investigating Changes in Key Astrocytic Proteins Post Recurrent Early Life Seizures and ACTH Treatment.*
DE INBRE Research Symposium. Wilmington, DE.

2022 *Mechanism for Prevention of Cognitive Impairments After Early Life Seizures with ACTH.*
Nemours Research Week. Wilmington, DE. (student invited abstract)

2022 *Investigating Changes in Key Astrocytic Proteins Post Recurrent Early Life Seizures and ACTH Treatment.*
Nemours Research Week. Wilmington, DE.

2022 *Evidence of Neurons that Change Their Pattern of Firing Observed in the Postspike Filter.*
Nemours Research Week. Wilmington, DE. (postdoc abstract)

2022 *Mechanism for Prevention of Cognitive Impairments After Early Life Seizures with ACTH.*
Delaware Neuroscience Symposium. Newark, DE. (student invited abstract)

2022 *Mechanism for Prevention of Cognitive Impairments After Early Life Seizures with ACTH.*
Nemours Research Week. Wilmington, DE. (student abstract)

2022 *The Role of Astrocytes in Prevention of Cognitive Impairments Associated with Early Life Seizures with ACTH.*
Nemours Research Week. Wilmington, DE. (student abstract)

2023 *MC4Rs Facilitate Fear Extinction Learning and ACTH-driven Neuroprotection After Early Life Seizures.*
Society for Neuroscience. (student abstract)

2023 *The Role of Astrocytes in Prevention of Cognitive Impairments Associated with Early Life Seizures with ACTH.*
Delaware INBRE External Advisory Committee Meeting. Newark, DE. (student abstract)

2023 *MC4Rs Facilitate Fear Extinction Learning and ACTH-driven Neuroprotection After Early Life Seizures.*
Behavioral Neuroscience Area Seminar Series. Newark, DE. (student abstract)

2023 *Effect of Early-Life Seizures on Neuron-Astrocyte Dynamics and Neuroprotective Role of ACTH.*
Behavioral Neuroscience Area Seminar Series. Newark, DE. (student abstract)

2024 *Role of CBD in the Prevention of Learning and Memory Deficits after Early Life Seizures*
Scientistas Symposium. Newark, DE. (student abstract)

2024 *Role of CBD in the Prevention of Learning and Memory Deficits after Early Life Seizures*
ING Symposium. Newark, DE. (student abstract)

2024 *Role of CBD in the Prevention of Learning and Memory Deficits after Early Life Seizures*
Nemours Research week. Wilmington, DE. (student abstract)

2024 *Mechanisms for Heterogenous Outcomes in Tuberous Sclerosis Complex*
Nemours Research week. Wilmington, DE. (student abstract)

2024 *MC4Rs Facilitate Fear Extinction Learning and ACTH-driven Neuroprotection After Early Life Seizures.*
Gordon Research Conference for Mechanisms of Epilepsy and Neuronal Synchronization, Waterville Valley, NH. (student abstract)

2024 *Understanding Neuronal-Astrocyte Dynamics During Neurodevelopment: Implications for Pediatric Epilepsy.*
Gordon Research Conference for Mechanisms of Epilepsy and Neuronal Synchronization. Waterville Valley, NH. (student abstract)

2024 *Mechanisms for Heterogenous Outcomes in Tuberous Sclerosis Complex*
Gordon Research Conference for Mechanisms of Epilepsy and Neuronal Synchronization. Waterville Valley, NH (student abstract)

- 2024** *Investigating the Cognitive Effects of Acute Sepsis Survival in Mice.*
Delaware Neuroscience Symposium. Newark, DE. (student abstract)
- 2024** *Influences of Genetic Background on Behavioral Impairments in Tuberous Sclerosis Complex.*
Delaware Neuroscience Symposium. Newark, DE. (student abstract)
- 2024** *Mechanisms for Heterogenous Outcomes in Tuberous Sclerosis.*
Delaware Neuroscience Symposium. Newark, DE. (student abstract)
- 2024** *TSC Haploinsufficiency influences PS6 and GFAP in the PFC and Hippocampus.*
Delaware Neuroscience Symposium. Newark, DE. (student abstract)
- 2024** *ACTH normalizes ELS-induced network abnormalities in PFC.*
Delaware Neuroscience Symposium. Newark, DE. (student abstract)
- 2024** *Deep brain stimulation of medial septum corrects abnormal behavior and learning and memory deficits observed in FMR1-KO mice.*
Society for Neuroscience. (postdoc abstract)
- 2025** *Mechanisms for Heterogenous Outcomes in Tuberous Sclerosis Complex*
ING Symposium. Newark, DE (student abstract)
- 2025** *ACTH normalizes ELS-induced network abnormalities in PFC.*
Nemours Research Week, Wilmington, DE. (student abstract)
- 2025** *Mechanisms for Heterogenous Outcomes in Tuberous Sclerosis Complex*
Nemours Research Week. Wilmington, DE (student abstract)
- 2025** *ACTH normalizes ELS-induced network abnormalities in PFC.*
ING symposium. Newark, DE. (student abstract)
- 2025** *Astrocyte calcium dynamics in tuberous sclerosis complex.*
BME grad student symposium. Newark, DE. (student abstract)

Editorials, Reviews, Chapters, including participation in committee reports:

None

Alternative Media:

"An Interview with Dr. Amanda Hernan of the University of Vermont" International Youth Neuroscience Association. Article 38. 2020.

"A Deeper Look at Neuroplasticity" Synapse Oregon. Building Brain Awareness to Help Brain Injury. 2022. https://www.youtube.com/watch?v=_ACNDjjxqdc

Other Peer-Reviewed Scholarships Not Listed Above:

None

Community Service:

- 2014- Involved in the "request a scientist" program through 500 Women Scientists organization, which is a resource designed to amplify female voices in STEM fields
- 2018- AAAS SciLine registered expert. A program designed to connect scientists to journalists and other science communicators with the goal of creating a better-informed public.
- 2019- STEM Role Model and FabFem mentor. These national registry programs are designed to connect STEM and female STEM mentors to younger generations of students with interest in STEM fields.
- 2022- Faculty Advisor for the University of Delaware Epilepsy Awareness Club

Patents

None