UTD STANDARD FORMAT FOR FACULTY VITAE

02/10/2023
Catherine Thorn
School of Behavioral and Brain Sciences
Department of Neuroscience

Educational History:

B.S., 2002, Georgia Institute of Technology, Electrical Engineering

S.M., 2004, Massachusetts Institute of Technology, Electrical Engineering
Master's Thesis: *Characterization of I-V Medication Changes in MIMIC II* (PI: Roger Mark)

Ph.D., 2010, Massachusetts Institute of Technology, Electrical Engineering and Computer Science
Doctoral Thesis: *Simultaneous Activation of Multiple Memory Systems during Learning: Insights from Electrophysiology and Modeling* (PI: Ann Graybiel)

Employment History – principal positions since the Bachelor's degree:

Postdoctoral Associate, 2010-2011, Graybiel Laboratory, MIT, Cambridge, MA

Postdoctoral Fellow, 2011-2014, Moore Laboratory, Brown University, Providence, RI

Postdoctoral Fellow, 2014-2017, Pfizer Inc., Cambridge, MA

Assistant Professor, 2018-present, The University of Texas at Dallas, Richardson, TX

Other Employment History:

Instructor, 2003, Massachusetts Institute of Technology, Cambridge, MA
Women in Technology Program, Electrical Engineering module

Teaching Assistant, 2004-2005, Massachusetts Institute of Technology, Cambridge, MA
6.002 – Introduction to Circuits and Electronics

Instructor, 2014, Marine Biological Laboratory, Woods Hole, MA
Neural Systems & Behavior Course, Somatosensory module

Professional recognitions and honors:

Georgia Tech SWE-Weyerhaeuser Scholarship, 1999

Georgia Tech Most Outstanding Thesis in the School of Engineering, 2002

Georgia Tech ECE Faculty Award, 2002

DuPont-MIT Alliance Fellowship, 2002-2003

NSF Graduate Research Fellowship Honorable Mention, 2005

Friends of the McGovern Institute Fellowship, 2007-2008, MIT McGovern Institute

NIH Kirschstein National Research Service Award (NRSA) Postdoctoral Fellowship (F32), 2012-2014, NIH/NINDS

Rising Science and Technology Retention (STARs) Award: Institutional Award to UTD for recruitment of CA Thorn, 2017-2021, University of Texas Board of Regents

UT Dallas Dept. of Neuroscience Teaching award, 2022

Professional memberships:

Society of Women Engineers, 1998-2002

Institute of Electrical and Electronics Engineers, 1998-2012

Founding member, Postdocs in Brain Science, Brown University, 2014

Postdocs in Biomedical Research in New England, 2015-2017

Chair, Inaugural Postdoc Symposium Committee, 2016

Postdoc Advisory Committee, Pfizer Worldwide Research and Development, 2015-2017

International Basal Ganglia Society, 2010-2013, 2023-present

Society for Neuroscience, 2006-present

Pavlovian Society, 2020-present

Dopamine Society, 2022-present

Articles in refereed journals:

1. Sanchez C.A., Brougher J, Krishnan D.G., **Thorn C.A**. Longitudinal assessment of skilled forelimb motor impairments in DJ-1 knockout rats. *Behav Brain Research.* 1011 Apr 29;424:113774. Doi: 10.1016/j.bbr.2022.113774. Epub 2022 Jan 29.

2. Brougher J, Aziz US, Adari N, Chaturvedi M, Jules A, Shah I, Syed S, **Thorn CA**. Self-administration of right vagus nerve stimulation activates midbrain dopaminergic nuclei. *Front Neurosci.* 2021 Dec 16;15:782786. Doi: 10.3389/fnins.2021.782786.

3. Tseng C.-T., Gaulding S.G., **Thorn C.A**. Local activation of α2 adrenergic receptors is required for vagus nerve stimulation induced motor cortical map plasticity. *Scientific Reports.* 2021 Nov 4;11(1):21645. doi: 10.1038/s41598-021-00976-2.

4. Brougher J., Sanchez C.A., Aziz U.S., Gove K.F., **Thorn C.A**. 2021. Vagus nerve stimulation induced motor map plasticity does not require cortical dopamine. *Front Neurosci.* 2021 Aug 23. doi: https://doi.org/10.3389/fnins.2021.693140.

5. Shukla T, de la Peña JB, Perish JM, Ploski JE, Stumpf CR, Webster KR, **Thorn CA,** Campbell ZT. 2020. A Highly Selective MNK Inhibitor Rescues Deficits Associated with Fragile X Syndrome in Mice. *Neurotherapeutics*. 2021 Jan;18(1):624-639. doi: 10.1007/s13311-020-00932-4. Epub 2020 Oct 1.

6. Tseng C-T*, Brougher J*, Gaulding SJ, Hassan BS, **Thorn CA.** 2020. Vagus nerve stimulation promotes cortical reorganization and reduces task-dependent calorie intake in male and female rats. *Brain Res.* 2020 Dec 1;1748:147099. doi: 10.1016/j.brainres.2020.147099. Epub 2020 Sep 4. *These authors contributed equally to this work.

7. Sanchez CA, Brougher J, Rahebi KC, **Thorn CA.** 2020. Preparation of Peripheral Nerve Stimulation Electrodes for Chronic Implantation in Rats. *J Vis Exp.* 2020 Jul 14;(161). Doi: 10.3791/61128.

8. **Thorn CA**, Moon J, Bourbonais CA, Harms J, Edgerton JR, Stark E, Steyn SJ, Butter CR, Lazzaro JT, O'Connor RE, Popiolek M. 2019. Striatal, Hippocampal, and Cortical Networks Are Differentially Responsive to the M4- and M1-Muscarinic Acetylcholine Receptor Mediated Effects of Xanomeline. *ACS Chem Neurosci*. 2019 Mar 20;10(3):1753-1764. doi: 10.1021/acschemneuro.8b00625. Epub 2018 Dec 11.

9. Davoren JE, Garnsey M, Pettersen B, Brodney MA, Edgerton JR, Fortin J-P, Grimwood S, Harris AR, Jenkinson S, Kenakin T, Lazzaro JT, Lee C-W, Lotarski SM, Nottebaum L, O'Neil SV, Popiolek M, Ramsey S, Steyn SJ, **Thorn CA**, Zhang L, Webb D. 2017. Design and synthesis of γ- and δ-lactam M1 positive allosteric modulators (PAMs): Convulsion and cholinergic toxicity of an M1-selective PAM with weak agonist activity. *J Med Chem*. 60(15):6649-6663. DOI: 10.1021/acs.jmedchem.7b00597.

10. **Thorn CA,** Popiolek M, Stark E, Volfson D, Edgerton, JE. 2017. Effects of M1 and M4 activation on excitatory synaptic transmission in hippocampus CA1. *Hippocampus*. DOI: 10.1002/hipo.22732

11. Sherman M, Lee S, Law R, Haegens S, **Thorn CA**, Hamalainen M, Moore CI, Jones SR. 2016. Neural Mechanisms of Transient Neocortical Beta Rhythms: Converging Evidence from Humans, Computational Modeling, Monkeys and Mice. *Proc Natl Acad Sci USA.* 133(33):E4885-94. PMC4995995.

12. **Thorn CA,** Graybiel AM. 2014. Differential Entrainment and Learning-Related Dynamics of Spike and Local Field Potential Activity in the Sensorimotor and Associative Striatum. *J. Neurosci.* 34. 2845-59. PMC3931500

13. Normand EA, Crandall SR, **Thorn CA,** Murphy EM, Voelcker B, Browning C, Machan JT, Moore CI, Connors BW, Zervas M. 2013. Temporal and mosaic Tsc1 deletion in the developing thalamus disrupts thalamocortical circuitry, neural function, and behavior. *Neuron* 78, 895-909. PMC4529124

14. **Thorn CA**, Graybiel AM. 2010. Pausing to regroup: thalamic gating of cortico-basal ganglia networks. Neuron. 2010 Jul 29;67(2):175-8. Doi: 10.1016/j.neuron.2010.07.010.

15. **Thorn, CA,** Atallah H, Howe M, Graybiel AM. 2010. Differential dynamics of activity changes in dorsolateral and dorsomedial striatal loops during learning. *Neuron* 66, 781-795. PMC3108575.

16. Tort, AB, Kramer MA, **Thorn C,** Gibson DJ, Kubota Y., Graybiel AM, Kopell NJ. 2008. Dynamic cross-frequency couplings of local field potential oscillations in rat striatum and hippocampus during performance of a T-maze task. *Proc Natl Acad Sci USA* 105, 20517-20522. PMC2629291.

17. DeCoteau WE*, **Thorn C***, Gibson DJ, Courtemanche R, Mitra P, Kubota Y, Graybiel AM. 2007. Learning-related coordination of striatal and hippocampal theta rhythms during acquisition of a procedural maze task. *Proc Natl Acad Sci USA* 104, 5644-5649. PMC1838454. *These authors contributed equally to this work.

18. DeCoteau WE*, **Thorn C***, Gibson DJ, Courtemanche R, Mitra P, Kubota Y, Graybiel AM. 2007. Oscillations of local field potentials in the rat dorsal striatum during spontaneous and instructed behaviors. *J Neurophysiol* 97, 3800-3805. *These authors contributed equally to this work.

Refereed conference publications or abstracts:

1. Poster. CT Tseng, CA Thorn (2022, Nov) Locus coeruleus stimulation paired with motor training induces plasticity in rat primary motor cortex. 2022 Society for Neuroscience Conference. San Diego, CA.

2. Poster. HF Welch, I Sankaranarayanan, RA Morrison, J Brougher, AC Shembel, TJ Price, CA Thorn (2022 Nov.) Transcriptomics of Lateralized Vagal Sensory Pathways. 2022 Society for Neuroscience Conference. San Diego, CA.

3. Poster. D Calderon, R Rodriguez de Souza, CT Tseng, C Sanchez, J Ploski, CA Thorn, CK McIntyre (2022 Nov) Involvement of the Locus Coeruleus in the Enhancement of Fear Extinction Driven by Vagus Nerve Stimulation. 2022 Society for Neuroscience Conference. San Diego, CA.

4. Poster. CT Tseng, CA Thorn (2022, Jul.) Locus coeruleus stimulation paired with motor training induces motor cortical map plasticity. 2022 Gordon Research Conference on Optogenetic Approaches to Understanding Neural Circuits and Behavior. Sunday River, ME.

5. Poster. CT Tseng, H Welch, J Brougher, CA Thorn (2022, May) Is self-administration of right vagus nerve stimulation modulated by satiety? 2022 Dopamine Society Conference. Montreal, Quebec, CA

6. Poster. CT Tseng, H Welch, J Brougher, CA Thorn (2022, Mar.) Differential activation of dopaminergic circuits by right versus left vagus nerve stimulation. 2022 Gordon Research Conference on the Basal Ganglia. Ventura, CA.

7. Symposium talk. CA Thorn. (2021, Dec. 7) Dopaminergic mechanisms of VNS-induced motor system plasticity [Conference presentation]. 2021 International Brain Stimulation Conference. Charleston, SC.

8. Poster. J. Brougher, U. Aziz, M. Chaturvedi, A. Jules, I. Shah, C.A. Thorn. Rats self-administer right, but not left, cervical vagus nerve stimulation. 2021 Society for Neuroscience. Chicago, IL.

9. Poster. C.-T. Tseng, C.A. Thorn. Local antagonism of alpha-2 adrenergic receptors in the primary motor cortex blocks vagus nerve stimulation induced reorganization of the motor cortical map. 2021 Society for Neuroscience. Chicago, IL.

10. Poster. J. Brougher, C.A. Thorn. Differential activation of dopaminergic signaling pathways following right and left vagus nerve stimulation. Program No. P291.16 2020 Society for Neuroscience Global Connectome. Jan. 11-13, 2021. Online.

11. Poster. C.A. Sanchez, J. Brougher, D. Krishnan, C.A. Thorn. Longitudinal Assessment of Skilled Motor Function and Levodopa Treatment Efficacy in DJ-1 Knockout Rats. Program No. P110.03 2020 Society for Neuroscience Global Connectome. Jan. 11-13, 2021. Online.

12. Poster. J. Brougher, C.A. Thorn. Exploring the necessity of dopamine in vagus nerve stimulation induced motor map expansion. Program No. 582.09. 2019 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2019. Online.

13. Poster. C-T Tseng, SJ Gaulding, CA Thorn. Noradrenergic alpha-2 receptor antagonism inhibits vagus nerve stimulation dependent enhancement of motor cortical plasticity. Program No. 582.10. 2019 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2019. Online.

14. Poster. C.A. Sanchez, C.A. Thorn; Skilled motor assessment of the DJ-1 knockout rat. Program No. 379.11. 2019 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2019. Online.

15. Poster. A. M. SLOAN, C. A. SANCHEZ, D. K. BORN, C. A. THORN; A wireless operant behavior system for fine motor assessments in standard rack-mounted home cages. Program No. 582.07. 2019 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2019. Online.

16. Poster. Tseng, C.T., Thorn, C.A. The effect of noradrenergic alpha-2 receptor antagonism on vagus nerve stimulation dependent enhancement of neuroplasticity. *17th Annual Molecular and Cellular Cognition Society Poster Session* 2018

17. Poster. Thorn, C.A., Butler, C.R., Edgerton, J.R., Garst-Orozco, J., Harms, J.F., Stark, E., Popiolek, M. Striatal and hippocampal memory systems are differentially responsive to the M4- and M1-mediated effects of xanomeline. *Gordon Research Conference on the Basal Ganglia* 2018.

18. Poster. Thorn, C.A., Stark, E., Volfson, D., Edgerton, J.R. Activation of M1 and M4 muscarinic acetylcholine receptors biases synaptic transmission in hippocampus CA1. *International Symposium on Cholinergic Mechanisms.* 2016.

19. Poster. Thorn, C.A., Edgerton, J. Dissecting the roles of M1 and M4 receptors in CA1 excitatory transmission. *Society for Neuroscience Abstracts*. 2015.

20. Poster. Thorn, C.A., McDonnell, E., Moore, C.I. Dynamics of cortical and striatal activity during vibrissa-CS trace eyeblink conditioning. *Society for Neuroscience Abstracts.* 2014.

21. Poster. Thorn, C.A., Graybiel, A.M. Differential theta-band entrainment dynamics in sensorimotor and associative striatum. *Gordon Research Conference on the Basal Ganglia.* 2014.

22. Poster. Thorn, C.A., Moore, C.I. The role of the parafascicular nucleus in sensory perception. *Society for Neuroscience Abstracts.* 2013.

23. Workshop. "How Do Multiple Cortico-Basal Ganglia Loops Support Learning Across a Wide Range of Functional Domains?" Computational and Systems Neuroscience (Cosyne), 2011. Organized by M. Frank and C.A. Thorn.

24. Poster. Thorn, C.A., Atallah, H., Howe, M., Graybiel, A.M. Simultaneous activation of dorsolateral and dorsomedial striatal loops during T-maze learning. *International Basal Ganglia Society.* 2010.

25. Poster. Thorn C and Graybiel A (2009). Projection Neurons in Medial and Lateral Striatum Show Different Ensemble Patterns during Learning. *Frontiers in Systems Neuroscience. Conference Abstract: Computational and systems neuroscience*. doi: 10.3389

26. Poster. Thorn C, Atallah H, Howe M, Graybiel A. Ensemble unit activity differs between lateral and medial striatal regions during T-maze task learning. *Society for Neuroscience Abstracts*, 2008.

27. Poster. Thorn, C.A., Gibson, D.J., DeCoteau, W.E., Kubota, Y., Mitra, P., Graybiel, A.M., Striatal and hippocampal theta rhythms exhibit task-specific coherence relationships that are modulated by learning in a T-maze task. *Society for Neuroscience Abstracts*, 2007.

Invited talks:

2019 "Rewards, Habits and Decision-Making: Why Do People Behave the Way They Do?" Mary K. Craig Class, Dallas, TX. Invited Talk.

2019 "Neuromodulatory signaling in motor cortical plasticity" Frontiers Lunch Lectures at the Center for BrainHealth, UT Dallas. Departmental Talk.

2019 "Neuromodulatory signaling in motor cortical plasticity" Center for Vital Longevity Science Luncheon Series, UT Dallas. Departmental Talk.

Proposals submitted:

<u>2022</u>
Transcriptomics of Lateralized Vagal Sensory Pathways
PI: Catherine Thorn
UT Austin Core Lab / Parse Biosciences
2022; Grant covers cost of supplies & sample prep for RNA sequencing experiment
Current status: rejected

Peripheral nerve stimulation for activation of dopaminergic nuclei
PI: Catherine Thorn
NIH/NINDS R01 (new)
2022-2027; $2,151,247 requested
Current status: awarded (R01 NS126816)

2021
Exploring the role of alpha-2 noradrenergic receptors in cortical plasticity and stroke recovery
PI: Catherine Thorn; Co-I: Seth Hays
NIH/NINDS R01 (resubmission)
2022-2027; $2,391,918 requested
Current status: awarded (R01 NS123074)

DMS/NIGMS 1: Predictive Network Inference for Sparsely-Observed Neural Systems
Co-PIs: Justin Ruths, Tyler Summers, & Catherine Thorn
Joint DMS/NIGMS Initiative
2022-2025; $599,543 requested
Current status: rejected

Vagus nerve stimulation targets fear pathways to enhance extinction of conditioned fear
Co-PIs: Christa McIntyre & Catherine Thorn; Co-Is: Jonathan Ploski & Rimenez Rodriguez de Souza
National institute for Mental Health (NIMH) R01 (resubmission)
2022-2026, $2,733,587 requested
Current status: awarded (R01 MH126516)

CAREER: Understanding lateralization in visceral-mesolimbic reward signaling
PI: Catherine Thorn
NSF Career Award
2022-2027; $1,042,369 requested
Current status: rejected

Peripheral nerve stimulation for activation of dopaminergic nuclei
PI: Catherine Thorn
NIH/NINDS R01 (new)
2022-2027; $2,151,247 requested
Current status: rejected (Impact score: 31; Percentile: 20)
Resubmission date: 03/05/2022 (PI: CA Thorn; Co-I: M Rincon-Cortes) [awarded on resubmission]

Peripheral nerve stimulation for control of the mesolimbic dopamine system
PI: Catherine Thorn
NIH/NIDA R21 (resubmit)
2022-2024; $390,000 requested
Current status: awarded (R21 DA055166)

Inferring Effective Connectivity of Sparsely Sampled Neuronal Networks
Co-PIs: Justin Ruths & Catherine Thorn
The University of Texas at Dallas, SPIRE Seed Grant
2021-2022; $59,890 requested
Current status: awarded

2020
Exploring the role of alpha-2 noradrenergic receptors in cortical plasticity and stroke recovery
PI: Catherine Thorn; Co-I: Jonathan Ploski
NIH/NINDS R01 (new)
2021-2026; $2,390,893 requested
Current status: rejected (Impact score: 54; Percentile: 48)
Resubmission date: 11/05/2021 (PI: CA Thorn; Co-I: SA Hays) [awarded on resubmission]

Vagus nerve stimulation targets fear pathways to enhance extinction of conditioned fear
Co-PIs: Christa McIntyre & Catherine Thorn; Co-Is: Jonathan Ploski & Rimenez Rodriguez de Souza
NIH/NIMH R01 (new)
2021-2026, $2,369,456 requested
Current status: awarded (1 year) as R56 MH126516-01 (Impact score: 32; Percentile: 16)

Vagus nerve stimulation for the treatment of Parkinson's disease
PI: Catherine Thorn; Co-Is: Seth Hays & Michael Burton
NIH/NINDS R01 (new)
$2,168,738 requested (5 year award period)
Current status: rejected (Impact Score: 70; Percentile: 52)

Targeting the noradrenergic system to enhance stroke recovery
PI: Catherine Thorn
Malinckrodt Foundation Grant
$180,000 requested (3 year award period)
Current status: rejected

Examining the efficacy and mechanisms of vagus nerve stimulation enhancement of conditioned fear
PI: Catherine Thorn
Brain and Behavior Research Foundation Young Investigator Grant (NARSAD)
$70,000 requested (2 year award period)
Current status: rejected

Vagus Nerve Stimulation for the Treatment of Parkinson's Disease
PI: Catherine Thorn
Michael J. Fox Foundation Therapeutic Pipeline Pre-proposal
Budget not submitted (award provides up to $500,000 over a 2 year period)
Current status: rejected

Inferring Effective Connectivity of Sparsely Sampled Neuronal Networks
Co-PIs: Justin Ruths and Catherine Thorn
UT Dallas SPIRE Grant
$99,900 requested (1 year award period)
Current status: rejected

Exploring VNS as a Therapy for Parkinson's Disease
PI: Catherine Thorn; Co-Investigator: Seth Hays
NIH/NINDS R21 (resubmission)
$420,750 requested (2 year award period)
Current status: rejected (Impact Score: 44; Percentile: 32)

Mechanisms of Vagus Nerve Stimulation-Induced Enhancement of Extinction of Conditioned Fear
PIs: Christa McIntyre & Catherine Thorn; Co-I: Jonathan Ploski
NIH/NIMH R01 (resubmission)
$2,436,292 requested (5 year award period)
Current status: rejected (Impact Score: 47; Percentile: 32)

<u>2019</u>
Inferring structured causal models for predication and control of neural activity
PI: Justin Ruths; Co-PIs: Joseph Pancrazio, Tyler Summers, and Catherine Thorn
NSF CRCNS Grant
$1,117,172 requested (3 year award period)
Current status: rejected

Exploring the Role of alpha-2 Noradrenergic Receptors in Vagus Nerve Stimulation-Induced Plasticity in Motor Cortex
PI: Catherine Thorn; Co-I: Seth Hays
NIH/NINDS R01
$2,065,338 requested (5 year award period)
Current status: rejected

Cyclophilin-D regulation of mitochondrial function and synaptic transmission in a rodent model of neuropathology in schizophrenia
PI: Sven Kroener; Co-I: Catherine Thorn
NIH/NIMH R01
Current status: rejected

Exploring VNS as a Therapy for Parkinson's Disease
PI: Catherine Thorn; Co-Investigator: Seth Hays
NIH/NINDS R21 (new)
$408,396 requested (2 year award period)
Current status: rejected (Impact Score: 57; Percentile: 48)

Inferring Effective Connectivity of Neuromodulated Brain States
PIs: Justin Ruths & Catherine Thorn
University of Texas at Dallas SPIRE
$100,000 requested (2 year award period)
Current status: rejected

Next Generation MNK1/2 Inhibitors for Fragile X Syndrome
PIs: Zachary Campbell & Catherine Thorn
Department of Defense, Autism Research Program (ARP) Idea Development Award
No budget submitted (preproposal)
Current status: rejected

Mechanisms of Vagus Nerve Stimulation-Induced Enhancement of Extinction of Conditioned Fear
PIs: Christa McIntyre & Catherine Thorn; Co-I: Jonathan Ploski
NIH/NIMH R01
$2,420,987 requested (5 year award period)
Current status: rejected (Impact Score: 52; Percentile: 40)

<u>2018</u>
How does muscarinic activation normalize disrupted corticostriatal communication in schizophrenia?
PI: CA Thorn
Brain and Behavior Research Foundation Young Investigator Grant (NARSAD)
$70,000 requested (2 year award period)
Current status: rejected

Probing the Motor Cortical Reorganization That Underlies Learning, Injury, and Rehabilitation
PIs: CA Thorn, S Hays, J Ruths
NIH/NINDS U01
$1,493,838 requested (3 year award period)
Current status: rejected

Grants/contracts awarded:

<u>Current</u>
Peripheral nerve stimulation for activation of dopaminergic nuclei
PI: CA Thorn
NIH/NINDS R01 NS126816
2023-2027, $1,675,148

Peripheral nerve stimulation for control of the mesolimbic dopamine system
PI: CA Thorn
NIH/NIDA R21 DA055166
2021-2023; $390,000

Noradrenergic mechanisms of vagus nerve stimulation mediated stroke rehabilitation
PI: CA Thorn
NIH/NIMH R01 MH126516
2022-2027, $1,950,376

Vagus nerve stimulation targets fear pathways to enhance extinction of conditioned fear
Co-PIs: CK McIntyre & CA Thorn
NIH/NINDS R01 NS123074
2022-2026, $2,164,934

Inferring Effective Connectivity of Sparsely Sampled Neuronal Networks
Co-PIs: Justin Ruths & Catherine Thorn
The University of Texas at Dallas, SPIRE Seed Grant
2022; $59,890 (+1 year extension)

Vagus nerve stimulation targets fear pathways to enhance extinction of conditioned fear
Co-PIs: CK McIntyre & CA Thorn
NIH/NIMH R56 MH126516
2021-2022, $498,116 (+1 year no-cost extension)

Completed
Mechanisms of Vagus Nerve Stimulation-Induced Enhancement of Extinction of Conditioned Fear
Co-PIs: CK McIntyre & CA Thorn
UT Dallas BBS Stimulus Grant
2020-2021, $10,000

Home Cage System for Fine Motor Assessments in Aging Rodent Models
PI: Andrew Sloan; Subaward PI: CA Thorn
NIH Subaward 1R43AG059508-P1SUB1
2018-2019, $48,912.34

Parafasicular Nucleus: Its Role in Cortical and Striatal Salience Encoding
PI: CA Thorn
NIH/NINDS Award Number: 1F32 NS082043
2012-2014, $106,132

Teaching:

Doctoral advisement/direction:

Camilo Sanchez, PhD, BMEN	Spr. 2021	*Towards Vagus Nerve Stimulation for the Treatment of Parkinson's Disease*
Jackson Brougher	Spr. 2022	*Effects of VNS on Caloric Intake, Dopamine Signaling, & Self-Admin.*
Ching-Tzu Tseng		TBD
Hailey Welch		TBD
Chris Phillips		TBD

Masters advisement/direction:

Ching-Tzu Tseng	Spring 2019	N/A
Chris Phillips	Spring 2019	N/A
Raksha Nagaraj	Spring 2021	N/A
Joseph Saldino	Spring 2023 (expected)	N/A
Nicholas Kopchencko	Spring 2024 (expected)	N/A

Classroom teaching:

2018	Fall	ACN/HCS 7372	Graduate Seminar – Modern Techniques in Neuroscience (enrollment = 10)
2019	Spring	NSC 4356	Neurophysiology (enrollment = 32)
2019	Fall	NSC 4356	Neurophysiology (enrollment = 87)
2020	Spring	NSC 4356	Neurophysiology (enrollment = 35)
2020	Fall	NSC 4356	Neurophysiology (enrollment = 96)
2021	Spring	NSC 4v90	Special Topics – Health Disparities in Neurosci. (enrollment = 50)
2021	Fall	NSC 4356	Neurophysiology (enrollment = 98)
2022	Spring	NSC 4381	Health Disparities in Neuroscience (enrollment = 28)
2022	Fall	NSC 4356	Neurophysiology (enrollment = 59)
2023	Spring	NSC 4381	Health Disparities in Neuroscience (enrollment = 56)

Other:

Undergraduate Research and Teaching Internship Supervisor:

Year	Term	Course Number: Name	Enrollment
2018	Spring	NSC 4v98: Directed Research	1
2018	Fall	NSC 4v98: Directed Research	2
2019	Spring	NSC 4v98: Directed Research NSC 4v99: Independent Study	2 1
2019	Fall	NSC 4v98: Directed Research	7
2020	Spring	NSC 4v98: Directed Research BIOL 3v91: Research in Biol BMEN 4v98: Engineering Practicum NSC 4v96: Teaching Internship	11 2 1 1
2020	Fall	NSC 4v98: Directed Research NSC 4v96: Teaching Internship	13 3
2021	Spring	NSC 4v98: Directed Research	12
2021	Fall	NSC 4v98: Directed Research NSC 4v96: Teaching Internship BIOL 3v91: Undergrad Res. In Biol.	5 3 1
2022	Spring	NSC 4v98: Directed Research NSC 4397: Thesis Research BIOL 3v91: Undergrad Res. In Biol.	7 1 1
2022	Fall	NSC 4v98: Directed Research	5
2023	Spring	NSC 4v98: Directed Research NSC 4397: Thesis Research BIOL 3v91: Undergrad Res. In Biol.	6 1 1

Mentee awards received:

2022 Ching-Tzu Tseng (PhD): Society for Neuroscience Trainee Professional Development Award
2022 Kritika Ramesh (Undergraduate RA): UTD/UTSW Green Fellowship
2022 Umair Mohammed (Undergrad. RA): UTD SPUR Poster Award; UTD URSA Program
2022 Moni Akinsola (Undergrad. RA): UTD URSA Program
2020 Camilo Sanchez (PhD): Society for Neuroscience Trainee Professional Development Award
2020 Janiece Vancil (Undergraduate RA): UTD/UTSW Green Fellowship
2020 Ezinwa Kalunta-Crumpton (Undergraduate TA): UTD/UTSW Green Fellowship
2019 Marghi Jani (Undergraduate RA): UTD/UTSW Green Fellowship
2019 Analia Marzoratti (Undergarduate RA): UTD/UTSW Green Fellowship
2018 Ching-Tzu Tseng (Masters): Larry Cauller Travel Award

Student group faculty sponsor:

2020- Faculty sponsor, American Medical Women's Association (AMWA) UTD Student Chapter

Service:

National Service

2023	NIH/NINDS ZNS1 SRB-C 12, ad hoc reviewer
2023	NIH/NINDS ZNS1 SRB G(59), ad hoc reviewer
2020-2022	NIH/NINDS NST-2 Study Section (postdoc training grant panel), ad hoc reviewer
2020	Session Judge, Black in Neuro Conference

Ad hoc reviewer: *Brain Stimulation, Artificial Organs, Translational Psychiatry, Journal of Advanced Research*, *Psychology and Neuroscience*

University Service

2020-present	Institutional Animal Care and Use Committee (IACUC)
2023	Panelist, ASPIRE^2 Future Faculty Identification Panel
2023	ASPIRE^2 Liaison
2022	Undergraduate Research Scholar Awards (URSA) poster session judge
2022	Summer Platform for Undergraduate Research (SPUR) poster session judge
2020	MEGA Grant Reviewer, UTD Office of Research

School/Department Service

2022-23	Chair, Neuroscience Faculty Search Committee
2022-23	BBS Supporting Outstanding Academic Research (SOAR) Award & Symposium Cmte.
2022	BBS Computational Neuroscience Hiring Proposal Committee
2021-22	Graduate Program Steering Committee, Cognitive and Systems Neuroscience-SCN track
2020-22	Chair, PhD Admissions Committee, Cognitive and Systems Neuroscience-SCN track
2020-21	BBS Equity Justice and Inclusion Committee
2020-21	BBS Colloquium Series Committee
2020	Reviewer, BBS Small and Tucker Scholarships
2019-20	Faculty Search Committee, Department of Neuroscience
2019-20	PhD Admissions Committee, Cognitive and Systems Neuroscience-SCN track

Professional Development:

2019, 2020	UT Dallas Office of Research R.O.A.D. to DC
2022	*Course in Effective Teaching Practices.* The Association of College & University Educators (ACUE)