

Maria Magdalena Diehl

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EDUCATION

2000—2004	Emory University	B.S.	Neuroscience & Behavioral Biology
2006—2012	University of Rochester	Ph.D.	Neuroscience
			Advisor: Lizabeth M. Romanski

PREVIOUS POSITIONS

January 2013—July 2019	Postdoctoral Research Fellow University of Puerto Rico, School of Medicine Depts of Psychiatry and Anatomy & Neurobiology Advisor: Gregory J. Quirk
August 2004—July 2006	Post-baccalaureate Research Education Program (VT-PREP) Scholar, Virginia Tech Dept of Psychology Advisor: Robin Panneton
Nov 2002—May 2004	Research Assistant Yerkes National Primate Research Center Division of Neuroscience Advisors: Jim G. Herndon and Agnès Lacreux

GRANTS

January 2026 – December 2026	Woodcock Institute, Texas Women's University PI: Maria Diehl Title: Defining the role of prefrontal subregions for observational active avoidance Amount: \$20,000 total direct costs
July 2022 – June 2027	Cognitive and Neurobiological Approaches to Plasticity (CNAP) Center Phase 2 PI: Maria Diehl (research project lead) Title: Prefrontal circuits of active avoidance under social conditions in rats Amount: \$730,000 total direct costs (year 4 renewal approved on Dec 10, 2025)
<i>Completed</i> June 2025 – December 2025	Biostatistics, Epidemiology, and Research Design (BERD) Voucher Frontiers Clinical & Translational Science Institute (CTSI)

July 2022 – June 2023	Title: Social Interactions and Other Behavioral Correlates During Active Avoidance in Rats Amount: \$5000 voucher for biostatistician support Kansas State University Small Research Grant (USRG) PI: Maria Diehl
May 2021 – June 2022 (terminated early)	Title: The Role of the Anterior Cingulate Cortex in Active Avoidance Under Social Conditions in Rats. Amount: \$4500 K-INBRE developmental research project program (DRPP) PI: Maria Diehl Title: Effects of social interactions on the neural circuits of fear and avoidance Amount: \$150,000 direct costs
February 2015—April 2018	Ruth Kirchstein National Research Service Award (NRSA) for Postdoctoral Fellows, National Institutes of Mental Health PI: Maria M. Diehl Title: Investigating Active Avoidance Circuits with Unit Recording and Optogenetics
January 2009—December 2011	Center for Visual Science, University of Rochester PI: David Knill Title: Training Grant in Vision Science Role: Fellowship Trainee
December 2006—December 2008	Neuroscience training grant, University of Rochester PI: Howard Federoff Title: Interdepartmental Neuroscience Training Role: Fellowship Trainee

PEER-REVIEWED PUBLICATIONS

Journal Articles

- Payne K, Ruble S, Ness H, Durrett H, Kramer C, **Diehl MM**. (2026). "Darting during platform-mediated avoidance in male and female rats is spatially organized between reward and safety locations." Accepted at *Frontiers in Behavioral Neuroscience* DOI: 10.3389/fnbeh.2026.1887899. *Contribution: Conceptualization, Resources, Supervision, Funding acquisition, Visualization, Methodology, Writing—original draft, Project administration, Writing—review and editing.*
- Diehl MM**. (2026). "Beyond the Isolated Animal: Integrating Social Dimensions into Aversive Learning Paradigms." *Current Protocols in Neuroscience*. DOI: 10.1002/cpz1.70424.
- Ruble S, West L, Kramer C, Durrett H, **Diehl MM**. (2026). "The behavioral and neural architecture of observational active avoidance is shaped by demonstrator experience and observer sex." *Scientific Reports*. DOI: 10.1038/s41598-026-50571-6. *Contribution: Conceptualization, Resources, Supervision, Funding acquisition, Visualization, Methodology, Writing—original draft, Project administration, Writing—review and editing.*
- Kramer C, Ruble S, Fort TN, **Diehl MM**. (2025). "Modifying the platform-mediated avoidance task to study active avoidance within a social context in rats." *PLOS One*. DOI:

10.1371/journal.pone.0321776.

Contribution: Conceptualization, Resources, Supervision, Funding acquisition, Validation, Investigation, Visualization, Methodology, Writing—original draft, Project administration, Writing—review and editing.

Ruble S, Payne K, Kramer C, West L, Ness H, Erickson G, Scott A, **Diehl MM**. (2025). "Social context modulates active avoidance: Contributions of the anterior cingulate cortex in male and female rats." *Neurobiology of Stress*. DOI: 10.1016/j.ynstr.2024.100702.

Contribution: Conceptualization, Resources, Data curation, Formal analysis, Supervision, Funding acquisition, Validation, Investigation, Visualization, Methodology, Writing—original draft, Project administration, Writing—review and editing.

Diehl MM, Moscarello J, Trask S. (2024). "Defensive reactions following aversive learning: Behavioral outputs and overlapping circuits between conditioned fear and active avoidance." *Neurobiology of Learning and Memory*. DOI: 10.1016/j.nlm.2024.107943.

Contribution: Conceptualization, Visualization, Writing—original draft, Project administration, Writing—review and editing.

Martínez-Rivera FJ, Pérez-Torres J, Velázquez-Díaz CD, Sánchez-Navarro MJ, Huertas-Pérez CI, **Diehl MM**, Phillips ML, Haber SN, Quirk GJ. (2023). "A novel insular/orbito-prelimbic circuit that prevents persistent avoidance in a rodent model of compulsive behavior." *Biological Psychiatry*. DOI: 10.1016/j.biopsych.2022.02.008.

Contribution: Data curation, Formal analysis, Validation, Investigation, Visualization, Writing—review and editing.

Diehl MM, Plakke B, Albuquerque E, Romanski LM. (2022). "Representation of expression and identity by ventral prefrontal neurons." *Neuroscience*. DOI: 10.1016/j.neuroscience.2022.05.033.

Contribution: Conceptualization, Data curation, Formal analysis, Validation, Investigation, Visualization, Methodology, Writing—original draft, Writing—review and editing.

Diehl MM, Iravedra-García JM, Morán-Sierra J, Rojas-Bowe G, Gonzalez-Díaz FN, Valentín-Valentín V, Quirk GJ. (2020). "Divergent projections of the prelimbic cortex bidirectionally regulate active avoidance." *eLife*. 9:e59281 DOI: 10.7554/eLife.59281.

Contribution: Conceptualization, Data curation, Formal analysis, Supervision, Funding acquisition, Validation, Investigation, Visualization, Methodology, Writing—original draft, Project administration, Writing—review and editing.

Sangha, S, **Diehl MM**, Bergstrom H, Drew M. (2020). "Know safety, no fear." *Neuroscience and Biobehavioral Reviews*. 108:218-230. DOI: 10.1016/j.neubiorev.2019.11.006.

Contribution: Conceptualization, Visualization, Writing—original draft, Writing—review and editing.

Diehl MM, Bravo-Rivera C, Quirk GJ. (2019). "The study of active avoidance: a platform for discussion." *Neuroscience and Biobehavioral Reviews*. 107: 229-237. DOI: 10.1016/j.neubiorev.2019.09.010.

Contribution: Conceptualization, Visualization, Writing—original draft, Writing—review and editing.

Diehl MM, Lempert K, Parr A, Ballard I, Steele V, Smith DV. (2018). "Toward an integrative perspective on the neural mechanisms underlying persistent maladaptive behaviors." *European Journal of Neuroscience*. 48: 1870-1883. DOI: 10.1111/ejn.14083.

Contribution: Conceptualization, Writing—original draft, Project administration, Writing—review and editing.

Diehl MM, Bravo-Rivera C, Rodríguez-Romaguera J, Pagán-Rivera PA, Burgos-Robles A, Roman-Ortiz C, Quirk GJ. (2018). "Active avoidance requires inhibitory signaling in the rodent prelimbic prefrontal cortex." *eLife*. 7:e34657. DOI: 10.7554/eLife.34657.

Contribution: Conceptualization, Data curation, Formal analysis, Supervision, Funding acquisition, Validation, Investigation, Visualization, Methodology, Writing—original draft, Project administration, Writing—review and editing.

Diehl MM. (2018). "It's in the genes: a new marker for sex differences in depression and anxiety." *Biological Psychiatry*. 83:e35-e36. DOI: 10.1016/j.biopsych.2017.11.022.

Bravo-Rivera C*, **Diehl MM***, Román-Ortiz C*, Rodríguez-Romaguera J*, Rosas-Vidal LE*, Bravo-Rivera H, Quiñones-Laracuenta K*, Do-Monte FH*. (2015). "Long range GABAergic neurons in the prefrontal cortex modulate behavior." *Journal of Neurophysiology*. 114:1357-1359. DOI: 10.1152/jn.00861.2014. *All authors contributed equally to this work.

Contribution: Conceptualization, Writing—original draft, Project administration, Writing—review and editing.

Diehl MM and Romanski LM. (2014). "Responses of prefrontal multisensory neurons to mismatching faces and vocalizations." *Journal of Neuroscience*. 34: 11233-11243. DOI: 10.1523/JNEUROSCI.5168-13.2014.

Contribution: Conceptualization, Data curation, Formal analysis, Validation, Investigation, Visualization, Methodology, Writing—original draft, Writing—review and editing.

Romanski LM and **Diehl MM**. (2011). "Neurons responsive to face-view in the primate ventrolateral prefrontal cortex." *Neuroscience*. 189:223-235. DOI: 10.1016/j.neuroscience.2011.05.014.

Contribution: Visualization, Methodology, Writing—original draft, Writing—review and editing.

Kitamura, C., Panneton, R., **Diehl, M.**, & Notley, A. (2006). Attuning to the native dialect: When more means less. In *Proceedings of the Eleventh Australian International Conference on Speech Science & Technology* (pp. 124–129). Australasian speech.

Contribution: Investigation, Visualization, Writing – original draft.

Lacreuse A, **Diehl MM**, Goh MY, Hall MJ, Volk AM, Chhabra R, Herndon JG. (2005). "Sex differences in age-related motor slowing in the rhesus monkey: behavioral and neuroimaging data." *Neurobiology of Aging*. 26(4):543-51. DOI: 10.1016/j.neurobiolaging.2004.05.007.

Contribution: Formal analysis, Investigation, Visualization, Methodology, Writing—review and editing.

Book Chapter

Diehl MM and Romanski LM. "Processing and Integration of Faces and Vocalizations in the Primate Prefrontal Cortex" in *Integrating Face and Voice in Person Perception*, Ed. P. Belin, S. Campanella and T. Ethofer. New York: Springer, 2012. 45-69.

Contribution: Conceptualization, Visualization, Writing—original draft, Writing—review and editing.

Preprints and Manuscripts Under Review/In Preparation

Ruble SN*, **Diehl MM**. "Sex differences in behavioral and neural mechanisms in active avoidance in rodents." DOI: 10.31234/osf.io/cqzps_v1. https://doi.org/10.31234/osf.io/cqzps_v1

Contribution: Conceptualization, Visualization, Writing—original draft, Project administration, Writing—review and editing.

Ruble S, Stouder K, **Diehl MM**. "Rodents acquire active avoidance responses through observation using a modification of the platform-mediated avoidance task."

Stouder K, Ruble S, Wolf J, Zabzdyr P, **Diehl MM**. "Ultrasonic vocalizations in male and female rats during platform-mediated active avoidance."

Ruble S, Stouder K, Fort TN, **Diehl MM**. "Neural correlates in prelimbic and anterior cingulate cortex during acquisition and extinction of platform-mediated active avoidance in rats."

INVITED TALKS

October, 2026, (upcoming, virtual) – "The behavioral and neural architecture of observational active avoidance." Journal club presentation to graduate students and faculty at California State University (CSU) Brain Alliance.

November 2025, San Antonio, TX – "Should I stay or should I go? Social context shapes prefrontal circuits of avoidance in rats" Neuroscience seminar series, University of Texas at San Antonio.

August 2025, Sydney, Australia – "Deciphering prefrontal regulation of active avoidance learned through observation in male and female rats" Pavlovian Annual Meeting, Panel on The Developing Brain.

March 2025, Kansas City, MO – "Should I stay or should I go? Social context shapes prefrontal circuits of avoidance in rats." Seminars in Cell Biology and Physiology, University of Kansas Medical Center.

December 2024, Phoenix, AZ – "Prefrontal activation correlated with observational active avoidance in male and female rats." American College of Neuropsychopharmacology (ACNP), Panel on "The new faces of fear: cortical and subcortical orchestration of freezing, flight, avoidance, and escape."

June 2024, Panama City, Panama – International Behavioral Neuroscience Society (IBNS) Diversity Panel on "Empowering Diversity: Fostering Success for Minority Groups in Science".

April 2024, Knoxville, TN – "Prefrontal mechanisms of active avoidance within a social context." NeuroNET seminar series, University of Tennessee at Knoxville.

March 2024, St. Mary's City, MD – "Prefrontal mechanisms of active avoidance within a social context." Natural Science and Mathematics Colloquium, St. Mary's College of Maryland.

June 2023, Kansas City, KS – "Is activity in anterior cingulate cortex necessary for active avoidance in rats?" Central IDeA States regional meeting.

December 2022, Boulder, CO – "The role of anterior cingulate cortex during active avoidance under social conditions in rats." Neuroscience seminar series, University of Colorado at Boulder.

August 2022, Ventura, CA – "Activity in anterior cingulate cortex during active avoidance in rats." Gordon Research Conference on Frontal Cortex, Panel on "Aversive Processing and the Impact of Chronic Stress."

April 2022, Manhattan, KS – "Should I stay or should I go? Probing the neural circuits of active avoidance" Donuts & Research Series, SACNAS chapter of Kansas State University.

March 2021, virtual – "Prelimbic circuits bidirectionally regulate active avoidance." Seminar talk at the University of Washington, Graduate Program in Neuroscience, Seattle, WA.

March 2021, virtual – "Prelimbic circuits bidirectionally regulate active avoidance." Seminar talk at Tulane Brain Institute, New Orleans, LA.

January 2021, virtual – "Divergent projections of prelimbic cortex bidirectionally modulate active avoidance." Journal club presentation to graduate students and faculty at California State

University – Chico.

March 2020, Blacksburg, VA – “Neural circuits of active avoidance: a potential role in promoting resilience?” 2020 Spring Virginia Tech Post-Baccalaureate Research Education Program (VT-PREP) & Initiative for Maximizing Student Development (IMSD) Carver Forum Presentation, Virginia Polytechnic Institute and State University.

May 2019, San Juan, Puerto Rico – “Active avoidance as a coping strategy: a model for resilience.” Microsoft Research Summit.

December 2018, Bayamón, Puerto Rico – “Prefrontal Function in Fear and Avoidance.” Understanding Neuronal Activity: Genetics, Molecular Biology, Pharmacology, Electrophysiology, Optogenetics, Computational, and Imaging Perspectives.

February 2016, Bayamón, Puerto Rico – “Should I stay, or should I go? Probing the neural circuits of avoidance.” Universidad del Central Caribe.

November 2012, Rochester, NY – “Face and vocalization processing in the primate ventrolateral prefrontal cortex.” University of Rochester Neuroscience Retreat.

CONFERENCE TALKS

June 2024, Panama City, Panama – “Investigating the role of the anterior cingulate cortex during active avoidance within a social context.” International Behavioral Neuroscience Society (IBNS), Panel on “Understanding Defensive Avoidance: Insights into Neural Circuits and Behavior.”

June 2023, Manhattan, KS – “Is activity in anterior cingulate cortex necessary for active avoidance in rats?” CNAP COBRE annual site visit at Kansas State University.

June 2022, Glasgow, Scotland – “Activity in anterior cingulate cortex during active avoidance under social conditions in rats.” International Behavioral Neuroscience Society Annual Meeting (IBNS), Panel on “New insights into the neural circuits of threat avoidance behavior in rodents.” (Chair).

October 2021, Ann Arbor, MI – “Acquisition and expression of platform-mediated active avoidance under social conditions.” Pavlovian Annual Meeting, Panel on “Threat Avoidance: Novel models, new insights.”

January 2021, virtual – “Prelimbic circuits that bidirectionally control active avoidance.” Park City Winter Conference on the Neurobiology of Learning and Memory, Panel on “Novel Strategies for Advancing Active Avoidance Research.”

January 2020, Big Sky, MT – “Projections of the prelimbic cortex regulating active avoidance.” Winter Brain Conference, Panel on “Neural Systems Mediating Passive and Active Responses during Aversive Situations.”

October 2019, Chicago, IL – “Prefrontal circuits that drive active avoidance.” Society for Neuroscience Conference, Mini-symposium on Brain Circuits for the Selection and Scaling of Defensive Behavior.

June 2018, Boca Raton, FL – “Prelimbic function in fear and avoidance: from reaction to action.” International Behavioral Neuroscience Society Conference, Symposium on Regulating Fear Memories (Co-chair).

August 2017, Easton, MA – “Expression of active avoidance depends on inhibitory responses in rostral prelimbic neurons.” Gordon Research Seminar on Amygdala in Health and Disease.

- November 2016, Rio Piedras, Puerto Rico – “Opposing inhibition in prelimbic prefrontal neurons impairs active avoidance.” Neuroblitz, 25th Annual PR Neuroscience conference.
- July 2009, New York City, NY— “Distinct temporal lobe projections to audiovisual regions in the ventral prefrontal cortex support face and vocalization processing.” International Multisensory Research Forum.
- November 2008, Washington DC – “Distinct temporal lobe projections to audiovisual regions in the ventral prefrontal cortex support face and vocalization processing.” Advancements and Perspectives in Auditory Neuroscience (APAN) meeting.

SELECTED POSTERS FROM SCIENTIFIC CONFERENCES & SYMPOSIA

[since 2019; graduate mentees*; undergraduate mentees†]

- Ruble S*, Fort TN, Stouder K, Diehl MM. “Neural correlates of prelimbic and anterior cingulate cortices during acquisition and extinction of platform-mediated active avoidance in rats.” Poster presented at the Gordon Research Conference on Frontal Cortex, Holderness, NH. August 2026.
- Stouder K, Ruble S*, Diehl MM. “Chemogenetic inhibition of the infralimbic cortex increases freezing, but not avoidance during observational platform-mediated avoidance in rats.” Poster presented at the Gordon Research Conference on Frontal Cortex, Holderness, NH. August 2026.
- Stouder K, Wolf J†, Zabzdyr P*, Payne K, Ruble S*, Diehl MM. “Aversive calls are positively linked to fear responses and reward seeking during active avoidance within a social context.” Poster presented at the CNAP COBRE annual site visit, Manhattan, KS. June 2026.
- Ruble S*, Diehl MM. “Chemogenetic inhibition of the infralimbic cortex increases freezing without affecting avoidance during observational platform-mediated avoidance.” Poster presented at the CNAP COBRE annual site visit, Manhattan, KS. June 2026.
- Durrett H, Payne K, Ruble S*, Ness H†, Diehl MM. “Spatial and temporal dynamics of darting behavior reveal a navigational strategy that rats use during platform-mediated active avoidance.” Poster presented at the CNAP COBRE annual site visit, Manhattan, KS. June 2026.
- Wolf J†, Zabzdyr P*, Payne K, Stouder K, Ruble S*, Diehl MM. “Ultrasonic vocalizations during platform-mediated avoidance under social conditions in male and female rats.” Poster presented at the KSU Biology undergraduate research symposium, April 2026, and at the KSU undergraduate research symposium, April 2026.
- Hearne L†, Ruble S*, Payne K, Diehl MM. “Ultrasonic vocalizations during observational platform-mediated avoidance in male and female rats.” Poster presented at the KSU undergraduate research symposium, April 2026.
- Dingle A†, Ruble S*, Diehl MM. “Neural activation of the periaqueductal gray during observational learning of platform-mediated avoidance in male and female rats.” Poster presented at the KSU undergraduate research symposium, April 2026.
- Wolf J†, Zabzdyr P*, Diehl MM. “Ultrasonic Vocalizations During Social Platform Mediated Active Avoidance in Male and Female Rats.” Poster presented at the 24th Annual K-INBRE Symposium, Kansas City, Missouri. January 2026.
- Ruble S*, Durrett H, Stecher C†, Kramer C, West L†, Diehl MM. “Distinct behavioral phenotypes in an observational avoidance learning task show differences in medial prefrontal cortex

- activation as well as distinct brain-wide neural activation patterns." Poster presented at the 24th Annual K-INBRE Symposium, Kansas City, Missouri. January 2026.
- Durrett H, Payne K, Ness H†, Ruble S*, Diehl MM. "Spatial and temporal dynamics of darting behavior during platform-mediated active avoidance in rats." Poster presented at the 24th Annual K-INBRE Symposium, Kansas City, Missouri. January 2026.
- Golmohammadi M, Hsu W, **Diehl MM**. "Inverse Reinforcement Learning for Rat Locomotion Data." Poster presented at the 2025 K-State AI Symposium: Humans and the Machine. Manhattan, KS. October 2025
- Ruble S*, Summervill E†, Kramer C, West L†, Durrett H, Hall A†, **Diehl MM**. Prefrontal activation is correlated with observational platform-mediated avoidance in male and female rats. Poster presented at the Pavlovian Society annual meeting, Sydney, Australia. August 2025.
- Ruble S*, Summervill E†, Kramer C, West L†, Durrett H, Hall A†, **Diehl MM**. "Prior shock experience enhances observational avoidance learning in male but not female rats." Poster presented at the Rocky Mountain Psychological Association annual meeting, Denver, CO. April 2025.
- Hall A†, Ruble S*, **Diehl MM**. "Seeing is believing: Observer presence alters Demonstrator behavior during early, but not late observational PMA in rats." Poster presented at the Rocky Mountain Psychological Association annual meeting, Denver, CO. April 2025.
- Summervill E†, Ruble S*, **Diehl MM**. "Optimizing Automated Detection of Neural Activation in Rat Models of Observational Active Avoidance." Poster presented at the Rocky Mountain Psychological Association annual meeting, Denver, CO. April 2025.
- Ruble S*, Kramer C, West L†, Summervill E†, Hall B†, **Diehl MM**. "Neural activation during observational learning of platform-mediated active avoidance in male and female rats." Poster presented at the American College of Neuropsychopharmacology, Phoenix, AZ. December 2024.
- Ruble S*, Payne K, Kramer C, West L†, Ness H†, **Diehl MM**. "The anterior cingulate cortex modulates active avoidance under social and solitary contexts in male and female rats." Poster presented at the Biosafety and Biosecurity Summit at K-State, Manhattan, KS. October 2024.
- Ruble S*, Kramer C, West L†, **Diehl MM**. "Identifying behavioral and neural correlates of observational learning using the platform-mediated active avoidance task in rats." Poster presented at the Gordon Research Conference on Frontal Cortex, Holderness, NH. August 2024.
- Ruble S*, Kramer C, Vetter L†, West L†, **Diehl MM**. "Identifying behavioral and neural correlates of observational learning by modifying the platform-mediated active avoidance task in rats." Poster presented at the Rocky Mountain Psychological Association annual meeting, Denver, CO. April 2024 and the CNAP COBRE annual site visit, Manhattan, KS. June 2024.
- Ruble S*, Kramer C, Kettler C†, West L†, Auletti I†, **Diehl MM**. "Active avoidance is acquired more rapidly when learned through observation compared to direct experience in rats." Poster presented at the 22nd Annual K-INBRE Symposium, Manhattan, Kansas. January 2024.
- Kramer C, Flores Garcia R, Tejeda H, **Diehl MM**. "Friend or Foe? Determining how social interactions improve or impair learning behaviors in a platform-mediated active avoidance task in rats." Poster presented at the 22nd Annual K-INBRE Symposium, Manhattan, Kansas. January 2024.

- Ness H†, Kramer C, Ruble S*, **Diehl MM**. "Darting during the social partner PMA task." Poster presented at the 22nd Annual K-INBRE Symposium, Manhattan, Kansas. January 2024.
- *Received Poster Award***
- Ruble S*, Kramer C, Kettler Ct, West Lt, Auletti It, **Diehl MM**. "Active avoidance is enhanced when learned indirectly via observation than when learned via direct experience." Poster presented at the Pavlovian Society annual meeting, Austin, TX. September 2023.
- Kramer C, Ruble S*, West Lt, Payne K, Auletti It, **Diehl MM**. "Active avoidance under social conditions enhances fear responses and recruits the anterior cingulate cortex in male and female rats." Poster presented at the Pavlovian Society annual meeting, Austin, TX. September 2023.
- Ruble S*, Kramer C, West Lt, Payne K, Auletti It, **Diehl MM**. "Photoinhibition of anterior cingulate cortex impairs active avoidance under social conditions in rats." Poster presented at the Gordon Research Conference on Amygdala Function in Health and Disease. Castelldefels, Spain. July 2023.
- Auletti It, Ruble S*, Kramer C, **Diehl MM**. "Active avoidance under social conditions is facilitated by partner familiarity in rats." Poster presented at the Central IDeA regional meeting, Kansas City, KS and the CNAP COBRE annual site visit, Manhattan, KS. June 2023.
- West Lt, Valentin-Valentin V, Ruble S*, Kramer C, **Diehl MM**. "Learning active avoidance with a social partner reduces subsequent fear responses in a social exploration task." Poster presented at the Central IDeA regional meeting, Kansas City, KS and the CNAP COBRE annual site visit, Manhattan, KS. June 2023.
- Kramer C, Ruble S*, West Lt, Payne K, Auletti It, **Diehl MM**. "Optogenetic photoinhibition of anterior cingulate cortex impairs active avoidance under social conditions in rats." Poster presented at the Central IDeA regional meeting, Kansas City, KS and the CNAP COBRE annual site visit, Manhattan, KS. June 2023.
- Ruble S*, Kramer C, Kettler Ct, West Lt, Drouhard At, Auletti It, **Diehl MM**. "Avoidance is enhanced when learned through observation than when learned simultaneously with a partner." Poster presented at the Central IDeA regional meeting, Kansas City, KS and the CNAP COBRE annual site visit, Manhattan, KS. June 2023.
- Ruble S*, Kramer C, West Lt, Auletti It, **Diehl MM**. "Photosilencing Anterior Cingulate Cortex Neurons Impairs Active Avoidance." Poster presented at the Great Plains Students Psychology Convention. April 2023. ***Received Outstanding Graduate Poster Award***
- West Lt, Valentin-Valentin V, Ruble S*, Erickson G*, **Diehl MM**. "Optogenetic manipulations of prefrontal circuits during social exploration in rats." Poster presented at the 21st Annual K-INBRE Symposium, Overland Park, Kansas. January 2023.
- Drouhard At, Ruble S*, Thompson J†, Wrampe Et, West Lt, Kramer C, **Diehl MM**. "Investigating sex differences in rat dominance hierarchies using the tube test." Poster presented at the K-State Undergraduate Research Symposium. November 30, 2022.
- Erickson G*, Thompson J†, Scott At, Wickramasundara At, Krehbiel K†, **Diehl MM**. "The role of anterior cingulate cortex in platform-mediated active avoidance under social conditions in rats." Poster presented at the CNAP COBRE annual site visit, Manhattan, KS. June 2022.
- Thompson, J†, Krehbiel K†, Wickramasundara At, Scott At, Erickson G*, **Diehl MM**. "Does group size affect stability of dominance hierarchy in rats?" Poster presented at the Department of

Psychological Sciences Spring Undergraduate Research Convocation. May 3, 2022.

Wickramasundara, A†, Scott A†, Thompson J†, Krehbiel K†, Erickson G*, **Diehl MM**. "Do previous traumatic experiences affect social exploration?" Poster presented at the Department of Psychological Sciences Spring Undergraduate Research Convocation. May 3, 2022.

Erickson G*, Thompson, J†, Krehbiel K†, Wickramasundara A†, **Diehl MM**. "Expression of active avoidance behavior in rats depends on the presence of a social partner and partner experience level." Poster presented at the K-INBRE annual symposium January 2022 (virtual)

Scott A†, Rodriguez K†, Maze T, Erickson G*. **Diehl MM**. "Behavioral differences and neural correlates of emotional trauma on social interactions in rats." Poster presented at the American College of Neuropsychopharmacology (ACNP; Abstract No. M48), December 2021: San Juan, Puerto Rico.

Erickson G*, Scott A†, Maze T, Rodriguez K†, **Diehl MM**. "Expression of active avoidance depends on the experience of a social partner that is present during conditioning." Poster presented at the Society for Neuroscience (SfN; Abstract No. 660.03), November 2021: Chicago, IL (virtual).

Scott A†, Rodriguez K†, Maze T, Andrusak J†, Deihle F†, Erickson G*, **Diehl MM**. "Sex differences in social interactions in fear- and avoidance-conditioned rats. Poster presented at the Fall Research Convocation, Dept Psychological Sciences, Kansas State University, 2020: Manhattan, KS (virtual).

HONORS & AWARDS

- 2026: Selected for the 2027 Near-Peer mentorship program, American College of Neuropsychopharmacology (ACNP)
- 2026: Co-chair for 2026 Gordon Research Conference on Frontal Cortex
- 2025: Elected member of executive committee, Pavlovian Society
- 2025: Faculty Development Award, Kansas State University
- 2024: Travel supplement award, American College of Neuropsychopharmacology (ACNP)
- 2024: Vice-chair for 2024 Gordon Research Conference on Frontal Cortex
- 2023: Faculty Development Award, Kansas State University
- 2021: Women In Science Travel (WIST) fund
- 2020: Multimodal Integrated Neural Technologies (MINT) workshop award
- 2019: Panel Travel Fellow Awardee, 2020 Winter Conference on Brain Research
- 2019: DiGirolamo Travel Awardee, Dept of Psychological Sciences, Kansas State University
- 2019: NIH BRAINS (Broadening the Representation of Academic Investigators in NeuroScience) Fellow
- 2018: International Behavioral Neuroscience Society (IBNS) conference Travel Award
- 2016: Symposium on Persistent, Maladaptive Behaviors: why we make bad choices Travel Award
- 2015: 24th annual Puerto Rico Neuroscience conference Poster Award
- 2010: Advancements in Physiology and Auditory Neuroscience (APAN) conference Travel Award
- 2010: Conference on the Biology of Social Cognition V Tuition Award at Cold Spring Harbor Laboratory
- 2010: Statistical Analysis of Neuronal Data (SAND) conference Travel Award

- 2009: International Multisensory Research Forum (IMRF) Travel Award
- 2006: Interdepartmental Program in Neuroscience Merit Award at the University of Rochester
- 2005: Society for Research on Child Development (SRCD) conference Travel Award
- 2003: BrainStEm Fellow, study abroad neuroscience program between Emory University and the University of St. Andrews

MEMBERSHIPS

- 2020—present: Pavlovian Society
- 2018—present: International Behavioral Neuroscience Society (IBNS)
- 2017: Society of Biological Psychiatry
- 2013—2019: Molecular and Cellular Cognition Society (MCCS)
- 2009: Human Brain Mapping (HBM)
- 2008: Cognitive Neuroscience Society (CNS)
- 2007—2011: Advancements and Perspectives in Auditory Neuroscience (APAN)
- 2007—2021: Society for Neuroscience
- 2005: Society for Research in Child Development (SRCD)

TEACHING EXPERIENCE

Kansas State University

- Spring 2025: K-State Teaching and Learning Center (TLC) Professional Development Certificate
- 2024 – present Undergraduate course, *Introduction to Behavioral Neuroscience* (PSYCH 370)
- 2023 Undergraduate course, *Psychobiology* (currently *Principles of Neuroscience*) (PSYCH 470)
- 2021 —present *Ethics* lectures on authorship, mentor/mentee relationships, and how to evaluate research articles (PSYCH 968)
- 2021 —2023 Undergraduate seminar, *Introduction to Behavioral Neuroscience* (PSYCH 590)
- 2020—2021 Graduate seminar, *Neural circuits of motivated behaviors* (PSYCH 951)
- 2019 —present Undergraduate course, *Principles of Learning* (PSYCH 475)

University of Puerto Rico School of Medicine

- 2013—2019 Medical School Lectures: *Principles of Learning Theory* and *Anxiety Disorders*

University of Rochester

- 2010—2012 Scientist-Instructor for Life Sciences Learning Center; taught science lessons at various high schools.
- 2008 Teaching assistant for undergraduate neuroscience laboratory.

MENTORSHIP

[since August 2019]

- August 2026 – present Tyler Holland, psychology undergraduate, Kansas State University
- May 2026 – present Andy Jordan, psychology undergraduate, Kansas State University
- March 2026 – present Kaylee Stouder, full-time research assistant/postbaccalaureate, Kansas State University

January 2026 – present	Ainsley Eliason, psychology undergraduate, Kansas State University
Sept 2025 – May 2026	Alyson Dingle, education studies undergraduate, Kansas State University *Developing Scholars program
Sept 2025 – May 2026	Lauren Hearne, psychology undergraduate, Kansas State University, Honors Program
Sept 2025 – May 2026	Jasmine Wolf, animal biology undergraduate, Kansas State University *K-INBRE Scholar *Undergraduate Research Award, Spring 2026
May 2025 – March 2026	Cassidy Britton, psychology undergraduate, Kansas State University
Jan 2025 – present	Helen Durrett, high school student, Manhattan High School
Jan 2025 – May 2025	Kartik Yadiv, human health biology undergraduate, Kansas State University
Oct 2024 – May 2025	Ethan Summervill, psychology undergraduate, Kansas State University *Undergraduate Research Award, Spring 2025
Sept 2024 – Jan 2025	Jordan Willbrant, psychology undergraduate, Kansas State University *Undergraduate Research Award, Spring 2025
Aug 2024 – Dec 2024	Dylan Mader, life sciences undergraduate, Kansas State University
Aug 2024 – May 2025	Ashley Landau, conservation biology undergraduate, Kansas State University *Undergraduate Research Award, Spring 2025
June 2024 – Feb 2025	Penylopi Zabzdyr, psychology graduate student, Kansas State University
May 2024 – May 2025	Annabelle Hall, psychology undergraduate, Kansas State University *Undergraduate Research Award, Spring 2025
March 2024 – May 2024	Constanza Blanco Sosa, psychology undergraduate, Kansas State University
Jan 2024 – May 2024	Lizzie Vetter, psychology undergraduate, Kansas State University
Aug 2023 – May 2024	Capri Hellwig, psychology undergraduate, Kansas State University, Honors program *Undergraduate Research Award, Spring 2024 *KINBRE undergraduate research poster award
Aug 2023 – May 2024	Halle Ness, psychology undergraduate, Kansas State University, Honors program *Undergraduate Research Award, Spring 2024 *KINBRE undergraduate research poster award
Aug 2023 – May 2024	Maya Anchondo, communications undergraduate, Kansas State University *Developing Scholars Program
June 2023 – Dec 2023	Taylor Bachtel, biomedical sciences Masters student, Kansas State University
June 2023 – Aug 2023	Mario Caycedo, psychology undergraduate, Kansas State University
Jan 2023 – May 2024	Ivy Auletti, psychology undergraduate, Kansas State University *Undergraduate Research Award, Spring 2024
Jan 2023 – Dec 2023	Charlotte Kettler, psychology undergraduate, Kansas State University
Jan 2023 – May 2023	Jyothilakshmi Kalarikkal, nutritional sciences undergraduate, Kansas

	State University
Oct 2022 – June 2024	Cassandra Kramer, full-time research assistant/postbaccalaureate, Kansas State University
Aug 2022 – May 2023	Allison Drouhard, psychology undergraduate, Kansas State University
July 2022 – Dec 2023	Lexe West, psychology undergraduate, Kansas State University * McNair Scholar * Goldwater Scholar
July 2022 – present	Shannon Ruble, psychology graduate student, Kansas State University * Arts & Sciences Small Grant Research Award, December 2022 * Outstanding Graduate Student Poster award, Great Plains Student Psychology Conference, April 2023 * Arts & Sciences Travel Award, Summer 2023 * Graduate Student Council Travel Award, Summer 2023; Spring 2024 * NSF Graduate Research Fellowship Program (GRFP) awardee, 2024 * Gordon Research Conference on Frontal Cortex, early career award, Summer 2024
June 2022 – Aug 2022	Allison Moser, high school student, Rock Creek High School
May 2022 – Feb 2023	Emma Wrampe, psychology undergraduate, Kansas State University
July 2021 – May 2022	Jenna Thompson, biology undergraduate, Kansas State University
June 2021 – Aug 2022	Ashi Wickramasundara, high school student, Manhattan High School
June 2021 – May 2022	Kelly Krehbiel, psychology undergraduate, Kansas State University
Aug 2020 – Dec 2022	Gregory Erickson, psychology graduate student, Kansas State University
Jan 2020 – July 2021	Katherine Rodriguez, psychology undergraduate, Kansas State University * McNair Scholar
Dec 2019 – May 2020	Jonathan Andrusak, Christian ministry undergraduate, Manhattan Christian College, Manhattan, KS
Dec 2019 – May 2020	Felipe Deihle, psychology undergraduate, Kansas State University
Sept 2019 – May 2022	Alyssa Scott, psychology undergraduate, Kansas State University * Shanteau Fellow, 2020-2021 * Oral presentation at CNAP brownbag, Spring 2021 * Undergraduate Research Award, Spring 2020

SERVICE TO THE FIELD

Editorial Service

Adhoc reviewer for *Current Biology*, *Proceedings of the National Academy of Sciences*, *Neuropsychopharmacology*, *Oxford Open Neuroscience*, *Behavioural Brain Research*, *Nature Communications*, *Frontiers in Behavioral Neuroscience*, *The Journal of Neuroscience*, *Scientific Reports*, *Nature*, *Neurobiology of Learning and Memory*, *eLife*, *Psychopharmacology*, *Cerebral Cortex*, *Neurobiology of Stress*, *Frontiers in Systems Neuroscience*, *Science Reports*, *Learning and Memory*, *Neuropharmacology*, *Biological Psychiatry*, *BMC Psychology*

2019 – present Reviewing editor for *Frontiers in Neurology/Neuroscience/Psychiatry*

Grant Reviewing Service

2022-present: Grant reviewer for National Institutes of Health
2021 – 2024: Grant reviewer for National Science Foundation
2019 Grant reviewer for U.S. Army Research Office

Other Service

2025-2028: Executive Committee, Pavlovian Society
2025: Thesis examiner for Elise Cleary, Laboratory of Dr. James Crane, University of Tasmania, Australia
2024-2026: Co-chair for Gordon Research Conference on Frontal Cortex for 2026 meeting
2022-2024: Vice-chair for Gordon Research Conference on Frontal Cortex for 2024 meeting
2022 – present: Thesis committee member for Nashaly Irizarry, Laboratory of Dr. James Porter, Ponce Health Sciences University, Puerto Rico
2006—2012: Member, Colloquium and Retreat committee, Neuroscience Graduate Program, University of Rochester.
2006-2012: Graduate Women in Neuroscience (GWIS), University of Rochester.
2006-2008: Member and Cluster Representative, Graduate Student Society, University of Rochester.

COMMUNITY ENGAGEMENT

November 2025: Discussed Diehl Lab research on Neuroscientists Talk Shop Podcast “Learning by Watching”
<https://www.youtube.com/watch?v=VE1mHIu5PG8>
June 2025: Protocols.io Spotlight on PLoS One publication (Kramer et al., 2025)
<https://youtu.be/gFz4tfh5t98>
December 2024: Faculty Research Spotlight, K-State Research weekly newsletter
[KSU research weekly newsletter](https://ksu-research-weekly-newsletter)
May 2024– present: NeuroKids event – co-organized neuroscience demonstrations for local elementary school kids, Kansas State University (May 2024, April 2025, October 2025, April 2026)
March 2024: Diehl lab featured in K-State’s Seek Magazine
<https://www.k-state.edu/seek/spring-2024/solving-human-body-mysteries/>
Summer 2023-2024: Mandela Fellows networking at K-State, Leadership Studies
Aug 31, 2022: Interview on Women in Neuroscience (WiN) podcast:
<https://www.storiesofwin.org/profiles/2022/8/31/dr-maria-diehl>
June 2020: Pavlovian Society Featured Faculty:
<https://sydneytrask.github.io/Pavlovian-Society-Featured-Faculty/index.html#june, 2020: dr maria diehl>
Aug 2019: Interviews with Scientists by HelloBio:
<https://hellobio.com/blog/interviews-with-scientists-maria-diehl.html>
2016—2017: Organizer for annual Hike for Mental Health, El Yunque National Rainforest, Puerto Rico.
Sept 26, 2016: Neuroscience consultant for Keanu Reeves for Replicas Film, San Juan,

2013—2019: Puerto Rico.
Scientist-Instructor for Brain Awareness Week at various elementary,
middle, and high schools in Puerto Rico.