

Emily L. Newman, PhD

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EDUCATION & RESEARCH TRAINING

Undergraduate Education:

2006 – 2010 BSc, Psychology Tufts University

Postbaccalaureate Training:

2010 – 2013 Research Technician Tufts University

Graduate Education:

2013 – 2016 MSc, Experimental Psychology Tufts University

2016 – 2020 PhD, Experimental Psychology Tufts University

Postdoctoral Training:

2020 – 2025 Postdoctoral Fellow, Neuroscience McLean Hospital,
Harvard Medical School

ACADEMIC APPOINTMENTS

2023 – 2025	Instructor, Psychiatry	Harvard Medical School
2025 – present	Assistant Professor, Neuroscience	Tufts School of Medicine
2026 – present	Faculty Member, Neuroscience Program	Tufts Graduate School of Biomedical Science

ADMINISTRATIVE LEADERSHIP APPOINTMENTS

2025 – present	Director, The Ghahreman Khodadad Center for the Study of Excessive Pathological Selfishness	Tufts School of Medicine
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FUNDING SUPPORT

NIH NIMH Pathway to Independence Award (R00MH133869)

Title: Amygdala circuit mechanisms for stress-escalated aggression

Role: PI; **Funding amount:** \$750,000; **Funding period:** 4/2025 – 3/2028 (**ACTIVE**)

NIH NIMH Pathway to Independence Award (K99MH133869)

Title: Amygdala circuit mechanisms for stress-escalated aggression

Role: PI; **Total award amount:** \$127,710; **Funding period:** 9/2023 – 4/2025 (**COMPLETE**)

NIH NIMH Ruth L. Kirschstein Postdoctoral Individual National Research Service Award (F32MH125634)

Title: Thalamolimbic circuit mechanisms for social threat processing

Role: PI; **Total award amount:** \$193,362; **Funding period:** 1/2021 – 9/2023 (**COMPLETE**)

McLean Hospital Dorris Family “The Ride for Mental Health” Pilot Translational Research Award

Title: Translational role of central amygdala in trauma-related retaliatory aggression

Role: Co-PI; **Total award amount:** \$5,000; **Funding period:** 9/2021 – 10/2021 (**COMPLETE**)

NIH NIAAA Ruth L. Kirschstein Predoctoral Individual National Research Service Award (F31AA025827)

Title: Alcohol-escalated aggression: A role for medial prefrontal cortical interneurons in mice

Role: PI; **Total award amount:** \$75,768; **Funding period:** 9/2017 – 8/2019 (**COMPLETE**)

PUBLICATIONS Reported by Google Scholar on March 16, 2026: **Citations:** 1100, **h-index:** 16, **i10-index:** 20

1. Frier MD, Biggi NP, Babb JA, **Newman EL**, Covington HE, Weera MM (2026) [Aggression and repeated alcohol drinking-in-the-dark: Dissecting subtypes in outbred mice.](#) ***Psychopharmacology*** PMID: 41697288
2. Mayeaux MR, **Newman EL**, Ressler KJ, Hisey EE (2025) [Chronic social defeat stress in early adolescent male mice.](#) ***JoVE*** DOI: 10.3791/67113
3. Schuler H, Eid RS, Wu S, Tse Y, Cvetkovska V, Lopez J, Quinn R, Zhou D, Meccia J, Dion-Albert L, Bennett SN, **Newman EL**, Trainor BC, Pena CJ, Menard C, Bagot RC (2024) [Data-driven analysis identifies novel modulation of social behavior in female mice witnessing chronic social defeat stress.](#) ***Biological Psychiatry*** PMID: 39638223
4. Goodwin NL, Choong JJ, Hwang S, Pitts K, Bloom L, Islam A, Zhang YY, Szelenyi E, **Newman EL**, Miczek KA, Wright HR, McLaughlin RJ, Heshmati M, Nilsson SRO, Golden SA (2024) [Simple behavioral analysis: a platform for explainable machine learning.](#) ***Nature Neuroscience*** PMID: 38778146
5. Al-Kachak A, Di Salvo G, Fulton SL, Chan JC, Farrelly LA, Lepack AE, Bastle RM, Kong L, Cathomas F, **Newman EL**, Menard C, Ramakrishnan A, Safovich P, Lyu Y, Covington HE, Shen L, Gleason K, Tamminga CA, Russo SJ, Maze I (2024) [Histone serotonylation in dorsal raphe nucleus contributes to stress- and antidepressant-mediated gene expression and behavior.](#) ***Nature Communications*** PMID: 38871707
6. Brown, SE, Wang Z, **Newman EL**, Engin E, Berretta S, Balu DT, Folorunso OO (2024) [Serine racemase deletion alters adolescent social behavior and whole brain cFos activation.](#) ***Frontiers in Psychiatry*** PMID: 38979499
7. Bordes J, Miranda L, Reinhardt M, Narayan S, Hartmann J, **Newman EL**, Brix LM, van Doeselaar L, Engelhardt C, Dillman L, Mitra S, Ressler KJ, Putz B, Agakov F, Muller-Myhsok B, Schmidt MV (2023) [Automatically annotated motion tracking identifies a distinct social behavioral profile following chronic social defeat stress.](#) ***Nature Communications*** PMID: 37463994
8. Hisey E, Fritsch E, **Newman EL**, Ressler KJ, Kangas B, Carlezon W (2023) [Early life stress in male mice blunts responsiveness in a translationally relevant reward task.](#) ***Neuropsychopharmacology*** PMID: 37258714
9. Narendra S, Klengel C, Hamzeh B, Patel D, Otten J, Lardenoije R, **Newman EL**, Miczek KA, Klengel T, Ressler KJ, Suh J (2022) [Genome-wide transcriptional profiling uncovers a similar oligodendrocyte-related transcriptional response to acute and chronic alcohol drinking in the amygdala.](#) ***Translational Psychiatry*** PMID: 36371333
10. McCullough KM, Katrinli S, Hartmann J, Lori A, Klengel C, Missig G, Klengel T, Langford NA, **Newman EL**, Anderson KJ, Smit AK, Carroll I, Ressler KJ, Carlezon WA (2022) [Blood levels of TRECs provide an index of exposure to traumatic stress in mice and humans.](#) ***Translational Psychiatry*** PMID: 36192377
11. Velasco E, Florido A, Flores A, Senabre E, Gómez-Gómez A, Torres A, Roca A, Norrholm S, **Newman EL**, Das P, Ross R, Lori A, Pozo O, Ressler K, García-Esteve L, Jovanovic T, Andero R (2022) [PACAP-PAC1R modulates fear extinction via the ventromedial hypothalamus.](#) ***Nature Communications*** PMID: 35902577
12. Miczek, KA, DiLeo A, **Newman EL**, Akdilek N, Covington HE (2022) [Neurobiological bases of alcohol consumption after social stress.](#) ***Current Topics in Behavioral Neuroscience*** PMID: 34964935
13. **Newman EL**, Covington HE, Leonard MZ, Burk K, Miczek KA (2021) [Hypoactive thalamic *Crh*⁺ cells in a female mouse model of alcohol drinking after social trauma.](#) ***Biological Psychiatry*** PMID: 34281710
Related commentary: Rowson SA, Pleil KE (2021) [Social stress-induced behavioral adaptations in females: A focus on midline thalamus *Crh* neurons.](#) ***Biological Psychiatry*** PMID: 34556205
14. **Newman EL**, Covington HE, Suh J, Bickaci MB, Ressler KJ, DeBold JF, Miczek KA (2019) [Fighting females: Neural and behavioral consequences of social defeat stress in female mice.](#) ***Biological Psychiatry*** PMID: 31255250
Related commentary: Logan RW (2019) [Adapting social defeat stress for female mice using species-typical interfemale aggression.](#) ***Biological Psychiatry*** PMID: 31601365

15. Covington HE, **Newman EL**, Leonard MZ, Miczek KA (2019) Translational models of adaptive and excessive fighting: An emerging role for neural circuits in pathological aggression. *F1000* PMID: 31281636
16. Covington HE, **Newman EL**, Tran S, Walton L, Hayek W, DeBold JF, Miczek KA (2018) The urge to fight: Persistent escalation by alcohol and role of NMDA receptors in mice. *Frontiers in Behavioral Neuroscience* PMID: 30271332
17. **Newman EL**, Terunuma M, Wang T, Hewage N, Bicakci M, DeBold JF, Miczek KA (2018a) A role for prefrontal cortical NMDA receptors in murine alcohol-heightened aggression. *Neuropsychopharmacology* PMID: 29052618
Related commentary: Torregrossa MM (2018) A role for prefrontal cortical NMDA receptors in murine alcohol-heightened aggression. *Neuropsychopharmacology* PMID: 29317778
18. **Newman EL**, Albrechet-Souza L, Andrew PM, Auld JG, Burk KC, Hwa LS, Zhang EY, DeBold JF, Miczek KA (2018b) Persistent escalation of alcohol consumption by mice exposed to brief episodes of social defeat stress: suppression by CRF-R1 antagonism. *Psychopharmacology* PMID: 29696309
19. **Newman EL**, Leonard MZ, Arena DT, de Almeida RMM, Miczek KA (2018c) Social defeat stress and escalation of cocaine and alcohol consumption: Focus on CRF. *Neurobiology of Stress* PMID: 30450381
20. Sturmeijer P, Miczek KA, DeBold JF, Gobrogge K, **Newman EL**, de Almeida RMM (2017) The role of neurotransmitters in violence and aggression. In *The Wiley Handbook of Violence and Aggression*, P. Sturmeijer (Ed.). <https://doi.org/10.1002/9781119057574.whbva019>
21. **Newman EL**, Gunner G, Huynh P, Gachette D, Moss SJ, Smart TG, Rudolph U, DeBold JF, Miczek KA (2016) Effects of *Gabra2* point mutations on alcohol intake: Increased binge-like and blunted chronic drinking by mice. *Alcohol: Clinical and Experimental Research* PMID: 27717041
22. Miczek KA, DeBold JF, Hwa LS, **Newman EL**, de Almeida RMM (2015) Alcohol and violence: Neuropeptidergic modulation of monoamine systems. *Annals of the New York Academy of Sciences* PMID: 26285061
23. **Newman EL**, Smith KS, Takahashi A, Chu A, Hwa LS, Chen Y, DeBold JF, Rudolph U, Miczek KA (2015) $\alpha 2$ -containing GABA(A) receptors: A requirement for midazolam-escalated aggression and social approach in mice. *Psychopharmacology* PMID: 26381154
24. Hwa LS, Nathanson AJ, Shimamoto A, Tayeh JK, Wilens AR, Holly EN, **Newman EL**, DeBold JF, Miczek KA (2015) Aggression and increased glutamate in the mPFC during withdrawal from intermittent alcohol in outbred mice. *Psychopharmacology* PMID: 25899790
25. **Newman EL**, Chu A, Bahamon B, Takahashi A, DeBold JF, Miczek KA (2012) NMDA receptor antagonism: Escalation of aggressive behavior in alcohol-drinking mice. *Psychopharmacology* PMID: 22588250

MANUSCRIPTS UNDER REVIEW

1. Mackert S, Niemeyer C, Mecdad Y, Ebert T, Bajaj T, Durand S, Hofer SJ, Zellner A, Bestehner B, Engelmann J, Gisabella B, Kempf V, Heckmann LA, Laakmann M, **Newman EL**, Sokn C, Heinz DE, Junglas E, Uribe-Marino A, Magnes C, Klengel C, Muller A, Opriessnig L, Meinitzer A, Lennarz M, Wirtz Martin KM, Albatarni R, Brockherde M, Lieb K, Rohner H, Stoffel-Wagner B, Philippsen A, Kuster B, Kolle M, Ressler KJ, Opel N, Schmidt MV, Pantazopoulos H, Muller MB, Kroemer G, Eisenberg T, Hartmann J, Madeo F, Gassen NC (*under review*) Spermidine restores stress-induced polyamine dysregulation and alleviates depression. PMID: 39677641
2. Hisey EE, Otten J, Klengel C, Dillman LJ, Beatty Z, Mayeaux M, Wang Z, Folorunso O, **Newman EL**, Hartmann J, Carlezon WA, Klengel T, Ressler KJ (*under review*) A critical role for the anterior insula in impaired adult social interaction after early life maltreatment

HONORS

2024	Gordon Research Conference on Optogenetics Poster Competition Winner
2023	Society of Biological Psychiatry Travel Award
2023 – 2028	NIH Pathway to Independence Award (K99/R00MH133869)
2022	American College of Neuropsychopharmacology Dr. Athina Markou Travel Award
2021	McLean Hospital Dorris Family “Ride for Mental Health” Translational Research Award
2021	Biological Psychiatry Somerfeld-Ziskind Research Award Semi-Finalist
2021 – 2023	NIH F32 Postdoctoral Individual National Research Service Award (F32MH125634)
2019	Tufts University Innovations in Psychological Science Award
2019	International Society for Research on Aggression Emerging Aggression Researcher
2018	Behavioral Pharmacology Society Travel Award
2017	European Behavioural Pharmacology Society Travel Award
2017 – 2019	NIH F31 Predoctoral Individual National Research Service Award (F31AA025827)
2016 & 2019	Tufts University Graduate Student Research Competition Winner
2015 – 2017	Research Society on Alcoholism Student Merit Award (annual)
2013 – 2018	Tufts University Graduate Student Travel Award (annual)
2012	Career Mentor Appreciation Award from The Education Cooperative
2010	Tufts University Senior Thesis High Honors Recipient

MENTORING**Graduate Students:**

2026 – present	Yingchu He	Neuroscience Doctoral Program
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Graduate Thesis Advisory Committees:

2025 – present	Lina Oh	Alexei Bygrave Lab	Role: Chair
2025 – present	Sahil Suresh	Michael Halassa Lab	Role: Member
2025 – present	Tuan Nguyen	Vivek Kumar Lab	Role: Member

Rotational Graduate Students:

2025	Yingchu He	Neuroscience Doctoral Program
2025	Elisabeth Lawton	Biomedical Research Master’s Program

Postbaccalaureate Students:

2025 – present	Jaya Kohol, Newman Lab Research Technician
2022 – 2025	Khalil J. Threadgill, Ressler Lab Research Technician

Undergraduate Students:

2025 – present	William Kraemer, Tufts University
2025 – present	Adele Beamer, Tufts University
2025 – present	Elliot Friesen, Tufts University
2025 – present	Griffen Collins, Tufts University
2025 – present	Sophie Nguyen, Tufts University
2023 – present	Nicholas Ressler, University of Washington
2021 – 2022	Hector Rivera Bermudez, Tufts University
2015 – 2018	Kelly Burk, Tufts University
2015 – 2017	Matthew Bicakci, Tufts University
2015 – 2016	Peter Andrew, Tufts University
2013 – 2015	Tiffany Wang, Tufts University
2012 – 2014	Darrel Gachette, Tufts University
2011 – 2013	Polly Huynh, Tufts University

2011 – 2013	Yang Chen, Tufts University
2010 – 2012	Georgia Gunner, Tufts University
2010 – 2012	Nishani Hewage, Tufts University

SERVICE ACTIVITIES

2026	Tufts Natalie Zucker Research Center Grant Selection Committee Member
2026	Tufts School of Medicine Brain & Behavior Cluster Hire Committee Member
2026	Tufts Neuroscience Retreat Committee Member
2025 - 2026	Tufts Computational Job Search Committee Member
2025 - 2026	Tufts GSBS Neuroscience Graduate Program Admissions Committee Member
2025 - present	Tufts Center for Neuroscience Research (CNR) Steering Committee Member
2025 - present	Tufts Working Group on Stress and Aging Member
2025	Session Chair, 14th Annual Tufts Neuroscience Symposium & William Shucart Lecture
2023 – 2025	Reviewer, McLean Hospital Silvio O. Conte Center for Stress Peptide Advanced Research, Education, & Dissemination (SPARED) Seed Grant
2022 – 2025	In-Lab Mentor, Post-Baccalaureate Harvard Medical School Program in Neuroscience
2021 – 2025	Review Committee Member, McLean Mental Health Research Summer Program for Black, Indigenous, and Underrepresented People of Color
2021, 2022	Host, McLean Neuroscience Seminar Series Invited Speakers: Dr. Sam Golden (2021), Dr. Ian Maze (2021), Dr. Kristen Pleil (2022)
2021	Panelist, University of Wisconsin Green Bay (UWGB) Annual College of Arts, Humanities and Social Sciences Common Conference, <i>Data-driven insights into mental health</i>
2021	Moderator, McLean Women in Science Day
2020 – 2024	Project One Team Member, The Silvio O. Conte Center for Stress Peptide Advanced Research, Education, & Dissemination
2018 – 2020	Graduate Student Chair, Annual Tufts University Biopsychology Lecture Committee
2014 – 2019	Graduate Student Panel Chair, Tufts University Annual G.V.R. Khodadad Endowed Lecture on the Neurobiology of Aggression

SCIENTIFIC MEMBERSHIPS

Society for Neuroscience (2014 – present)
 Society of Biological Psychiatry (2022 – present)
 European Behavioural Pharmacology Society (2017 – present)
 Research Society on Alcoholism (2014 – 2020)

AD-HOC REVIEWERSHIPS

Nature Communications, Proceedings of the National Academy of Sciences of the United States of America (PNAS), Neuropsychopharmacology, Neuropsychopharmacology Digital Psychiatry and Neuroscience, Neurobiology of Stress, Psychiatry Research, Psychopharmacology, Biology of Sex Differences, British Journal of Pharmacology, Neurochemistry International, Frontiers in Neuroscience

SELECTED INVITED TALKS AND SEMINARS

1. *Neural transformations: From emotion to aggression* (February 2026) Tufts University School of Medicine Neuroscience Grand Rounds, Boston, MA
2. *Leveraging neuropeptidergic signaling to reshape sociability* (January 2026) Tufts University School of Medicine, Neuroscience Seminar Series, Boston, MA

3. *Amygdala neuropeptide signaling ramps up aggressive internal state* (November 2025) West Roxbury VA Medical Center, Basic Science Seminar Series, Boston, MA
4. *Unraveling the neural mechanisms of aggression and violence* (June 2025) Tufts University School of Medicine, Inaugural Ghahreman Khodadad Professorship in Neuroscience Seminar, Boston, MA
5. *Neurobiological Bases of Aggression and Violence* (April 2025) Tufts University School of Medicine, Graduate School of Biomedical Sciences Annual Neuroscience Retreat, Boston, MA
6. *State-dependent de-escalation of aggressive behavior in mice* (April 2025) Society of Biological Psychiatry (SOBP) Annual Meeting, Neuroscience for Primetime Symposium, Toronto, Canada
7. *Identifying real-time neural activity signatures to predict and prevent aggression* (April 2025) Tufts University School of Medicine, Neurosciences and Behavioral Health Research Day, Boston, MA
8. *Animal Models for Understanding the Neurobiology of Aggression* (April 2025) Tufts University, School of Arts and Sciences, Invited Lecture for the Introduction to Cognitive & Brain Sciences, Medford, MA
9. *The aggressive amygdala: A neuropeptidergic cell activity signature for attack initiation* (June 2024) Yale School of Medicine, Advanced Postdoc Extramural Series (SYNAPSE), New Haven, CT
10. *Understanding the neurobiology of cyclical violence* (April 2024) National Institutes of Health, National Institute on Alcohol Abuse and Alcoholism (NIAAA), Rockville, MD
11. *The Aggressive Amygdala: Crh Cell Activity and Attack Initiation* (Jan 2024) McLean Hospital Research Day, Brief Communication, Belmont, MA
12. *An amygdala Crh+ cell activity signature for attack initiation* (June 2023) McLean Hospital 9.4T Users Group Meeting, Belmont, MA
13. *An amygdala cell activity signature for attack initiation* (March 2023) University of California Davis, Biological Psychology Seminar Series (virtual)
14. *Studies in aggression across species* (Feb 2023), McLean Hospital, Grand Rounds, Belmont, MA
15. *Amygdala Crh cells at the intersection of threat and aggression neurocircuitry* (Nov 2022) Annual Meeting of the Society for Neuroscience, Expanding Understanding of Fear Neurocircuitry from Bench to Bedside Minisymposium, San Diego, CA
16. *Leveraging mouse models to examine translational social interactions* (Nov 2022) Annual Neuropsychiatric & Psychedelics Drug Development Summit, Evaluating Psychiatric Preclinical Models, Boston, MA
17. *Aggression across species* (Oct 2022) Harvard Medical School Neurobiology of Psychiatric Disease, From Bench to Bedside, Boston, MA
18. *An amygdala Crh+ cell activity signature for aggression initiation* (June 2022) European Behavioral Pharmacology Society, Spanning the Spectrum of Social Behavior Workshop, Rome, Italy
19. *To bite or not to bite: Experience-dependent agonistic behavior* (Nov 2021) Wesleyan University, Hormones and Behavior, Middletown, CT
20. *A role for Crh+ central amygdala neurons in trauma-induced defensive aggression* (Sept 2021) McLean Hospital, Harvard Medical School, Silvio O. Conte Center for Stress Peptide Advanced Research, Education, & Dissemination (SPARED) Think Tank Data Blitz, Belmont, MA
21. *Neuroscience of social isolation* (June 2021) McLean Hospital, Harvard Medical School, Neuroscience Perspective: Translational Case Conference Series, Belmont, MA
22. *Social threat reactivity and alcohol drinking in socially stressed female mice: A role for hypoactive central medial thalamic Crh+ neurons* (Feb 2020) McLean Hospital, Harvard Medical School, Belmont, MA
23. *A novel model of female social defeat stress and stress-escalated alcohol drinking in C57BL/6J mice* (2018) Behavioral Pharmacology Society, San Diego, CA

SELECTED POSTER PRESENTATIONS

1. **Newman EL**, Threadgill KJ, Ressler N, Ponomareva OY, Bermudez HR, Hisey EE, Ressler KJ (2024) The aggressive amygdala: A *Crh*⁺ cell activity signature for attack initiation. Annual Meeting of the American College of Neuropsychopharmacology, Phoenix, AZ
2. **Newman EL**, Threadgill KJ, Ressler N, Ponomareva OY, Bermudez HR, Hisey EE, Ressler KJ (2024) An amygdala *Crh* cell activity signature for attack initiation. Optogenetic Approaches to Understanding Neural Circuits and Behavior Gordon Research Conference, Lucca, Italy
3. **Newman EL**, Threadgill KJ, Hisey E, Ressler N, Bermudez HR, Ressler KJ (2023) A *Crh*⁺ amygdala cell activity signature for initiation of aggression. Annual Meeting of the American College of Neuropsychopharmacology, Tampa, FL
4. **Newman EL**, Threadgill KJ, Hisey E, Ressler N, Bermudez HR, Ressler KJ (2023) An amygdala *Crh* cell activity signature for attack initiation. Amygdala Function in Emotion, Cognition and Disease Gordon Research Conference, Castelldefels, Spain
5. **Newman EL**, Threadgill KJ, Ressler N, Bermudez HR, Ressler KJ (2023) Offensive attack initiation triggered by an amygdala *Crh*⁺ cell activity signature. Society of Biological Psychiatry Annual Meeting, San Diego, CA
6. **Newman EL**, Hisey E, Bermudez HR, Ressler N, Ressler KJ (2022) Attack initiation triggered by an amygdala *Crh*⁺ cell activity signature. Annual Meeting of the American College of Neuropsychopharmacology, Phoenix, AZ
7. **Newman EL**, Threadgill KJ, Hisey E, Ressler N, Bermudez HR, Ressler KJ (2022) An amygdala *Crh*⁺ cell activity signature for attack initiation. Annual Meeting of the Society for Neuroscience, San Diego, CA
8. **Newman EL**, Hisey E, Fanning J, Ressler KJ (2022) To bite or not to bite: Isolating a cellular activity signature for stress-induced aggression in mice. Society of Biological Psychiatry Annual Meeting, New Orleans, LA