

Jordyn M. Wilcox, Ph.D.

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ACADEMIC APPOINTMENT:

2023- present **Assistant Teaching Professor**, Department of Psychology, College of Arts and Letters, Neuroscience and Behavior affiliated faculty, University of Notre Dame, Notre Dame, IN

EDUCATION:

2021 Ph.D., Neuroscience, Vanderbilt University, Nashville, TN

2015 B.A., Neuroscience and Biochemistry, Colorado College, Colorado Springs, CO
Distinction in Neuroscience, *Cum laude*

TEACHING EXPERIENCE:

Developed all course content for lectures, workshops and review sessions given. Refer to Teaching Portfolio for additional information.

Undergraduate Level

2023- present **Assistant Teaching Professor**, Department of Psychology, College of Arts and Letters, Neuroscience and Behavior (NSBH) affiliated faculty, University of Notre Dame
PSY30100: Statistics for Behavioral Sciences, PSY 30160: Methods for Behavioral Sciences, NSBH/PSY 30510: Behavioral Genetics, PSY10000/20000: Introductory Psychology

2022-2023 **Assistant Professor of Neuroscience**, Department of Psychological Science and Neuroscience, College of Science and Mathematics, Belmont University
PSY1150: Scientific Psychology (with lab), PSY4240: Learning and Conditioning (with lab), NEU3895: Developmental Neuroscience

2021 Invited **Lecturer**, Department of Medicine, Vanderbilt University Medical Center
“How to read a scientific paper” and “Statistics in the biomedical sciences” delivered for the Undergraduate Student Summer Research Academic Bootcamp, 12 students

2021 Visiting **Assistant Professor**, Department of Psychology, Colorado College
PY296: Functional Neuroscience, Summer Block A, 11 students
Development and delivery of 16 synchronous virtual lectures complimented by asynchronous virtual course content, including modified laboratory exercises, class discussions and examinations. Taught on the rigorous block plan (single course at a time for 3.5 weeks, meets daily).

2020 Visiting **Lecturer**, Department of Psychology, Colorado College
PY100: Introduction to Psychology, Summer Block A, 26 students (*max. enrollment*)
Created and delivered 15 lectures adapted to an abbreviated and virtual format, designed modified laboratory assignments, class discussions, and examinations. Block Plan.

Graduate Level

- 2019-2021 Invited **Lecturer**, Neuroscience Graduate Program, Vanderbilt University
“Murine Neurobehavior”, NURO8352: Methods and Experimental Design in Neuroscience Research, 5-10 students per year
- 2019 Teaching Assistant, Neuroscience Graduate Program, NURO8345: Cellular and Molecular Neuroscience, Vanderbilt University
- 2019 Workshop leader, Vanderbilt Brain Institute’s NSO Academic Committee, Statistics in the Biosciences Workshop created for and delivered to pre-doctoral students preparing for PhD candidacy exams, Vanderbilt University

Other Teaching

- 2019 Trainer, Surgical training for implantation of a wireless EEG/EMG recording device in mice, Vanderbilt University

Graduate Student Mentorship

- 2025 Dissertation Committee Member for R. Pichot (Cognition, Brain and Behavior, University of Notre Dame), “*The Contribution of Working Memory load, Neural Noise, and Alzheimer’s Disease Biomarkers to Age-Related Neural Dedifferentiation*”

Undergraduate Research Supervision

At the University of Notre Dame

- 2025-2026 Faculty Advisor, Psychology Honors Senior Thesis and Glynn Family Honors Program, S. Kang
“*Beyond Culture: How Context Shapes Stress Coping*”
- 2024-2025 Faculty Advisor, Rome International Scholars Program, R. Browning “*Freedom is Still Therapeutic: Ethics, AI, and the future of Mental Health*”

At Belmont University

- 2022-2023 Research mentor for > 10 students, included hands-on training, experimental design and planning, oversight and revision of research posters, contact time ~5 hour per week during academic year and ~40 hours per week during summer sessions, Belmont University

At Vanderbilt University

- 2017-2022 Day-to-day mentoring for > 5 undergraduate students in Dr. Bowman and Dr. Harrison labs; including training, experimental oversight and revision of research papers, student contact time ~10-15 hours per week, Vanderbilt University

Technical Skills

Computer software: Zoom (break out rooms, poll, Q & A function), Canvas (LMS), BlackBoard (LMS), Self-service Banner, SONA, Qualtrics (survey tool)

RESEARCH EXPERIENCE:

- 2023- present **Collaborator**, Dr. Fiona Harrison Laboratory, Vanderbilt University Medical Center
Contributing to data analysis, interpretation, and manuscript writing for active projects in this lab
- 2022-2023 Assistant Professor, Department of Psychological Science and Neuroscience, Belmont University
- 2021-2022 Postdoctoral Fellow, Department of Medicine, Vanderbilt University Medical Center
Mentor: Dr. Fiona E. Harrison
- 2016-2021 Graduate Student, Interdisciplinary Graduate Program and Vanderbilt Brain Institute, Vanderbilt University
Mentors: Dr. Aaron B. Bowman and Dr. Fiona E. Harrison
Dissertation: "Manipulating Brain Manganese and Behavior in Huntington's Disease"
- 2012-2015 Undergraduate Student, Behavioral Neurotoxicology Lab, Colorado College
Mentor: Dr. Lori L. Driscoll
Thesis: "Effects of brief postnatal polybrominated diphenyl ether (PBDE) exposure on GABA-dependent behaviors in the adult rat"

Laboratory Skills and Techniques

In vivo rodent work: Extensive murine behavioral testing, drug administration, survival surgery, EEG recording and analysis, transcardial perfusions and microdissection of select brain regions

Molecular biology: High-performance liquid chromatography (HPLC), enzyme kinetic assays, western blot, tissue fixation, sectioning and immunohistological staining, cell culture (primary glia and immortalized cell lines), immunocytochemistry, training in live cell imaging

Computer software: NeuroScore (rodent EEG analysis), Ponemah (rodent EEG acquisition), ANY-Maze (rodent behavior tracking), Noldus EthoVision (video tracking), SPSS Statistics, GraphPad PRISM, ImageJ, ImageStudioLite™

PROFESSIONAL ACTIVITIES:

Professional Organizations

- 2023- present Member, **Faculty for Undergraduate Neuroscience (FUN)**
- 2023- present Member, **Society for the Teaching of Psychology (STP)**, Division 2 of the American Psychological Association (APA)
- 2020-2023 Member, Society for Redox Biology and Medicine (SfRBM)
- 2019-2023 Member, Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART); Nutrition, Metabolism and Dementia PIA (Professional Interest Area); Alliance of Women Alzheimer's Researchers (AWARE) PIA

Intramural Service (University of Notre Dame)

- 2026-present **Committee Member**, Undergraduate Studies Committee, Department of Psychology, College of Arts and Letters
- 2025-present Honors Thesis Reader, Psychology Major
- 2024-present **Faculty Advisor**, University Chapter of Nu Rho Psi National Honor Society
- 2024-present **Committee Member**, Faculty Initiatives Subcommittee, Neuroscience and Behavior (NSBH) Steering Committee, College of Arts and Letters
- 2024 Faculty Co-Advisor, University Chapter of Nu Rho Psi National Honor Society
- 2024 - present Honors Thesis Reader, Neuroscience and Behavior (NSBH) Major
- 2024 Moderator and Panelist, Leadership Seminars screening of documentary “The Devil We Know”
- 2024 Host for Invited Guest Speaker Dr. Fiona Harrison of Vanderbilt University, Notre Dame Inaugural Neuroscience and Behavior (NSBH) Distinguished Lecture Series
- 2024- present **Committee Member**, Neuroscience and Behavior (NSBH) Steering Committee, College of Arts and Letters
- 2024 Committee Member, TPAC Search Committee, Department of Psychology
- 2023- present Committee Member, Committee on Appointments (CA), Department of Psychology

Intramural Service (Belmont University)

- 2024-2025 Committee Member, Pre-Professional Interview (PPI) Committee for Belmont student Karly Kammann
- 2023-2024 Chair, Pre-Professional Interview (PPI) Committee for Belmont student Josie Arant
- 2023 Committee Member, Laboratory Oversight Committee
- 2022-2023 Faculty Advisor, Student-led organization The Women’s Network
- 2022 Volunteer, Carter Lawrence Visit, Neuroscience outreach program for local elementary school
- 2022 Faculty Search Committee Member, tenure-track Clinical/Counseling PhD search
- 2022 Recruiter, Belmont University Fall Preview Days
- 2022 Reviewer, Belmont Institutional Review Board (IRB)

Intramural Service (Vanderbilt University)

2022	Volunteer, Annual “Brain Blast” outreach program with the Vanderbilt Brain Institute
2022	Peer Reviewer, <i>Vanderbilt Young Scientist</i> , internal journal showcasing research completed by local high schoolers
2019-2021	Curriculum Committee, Vanderbilt Brain Institute (VBI) Neuroscience Student Organization (NSO)
2019	Volunteer, Camp Vandy outreach with the Vanderbilt Brain Institute
2019	Abstract Reviewer, Vanderbilt Alzheimer’s Disease Research Day Program Committee
2019	Poster Judge and Abstract Reviewer, Vanderbilt Summer Science Academy
2018-2019	Academic Committee, Vanderbilt Brain Institute (VBI) Neuroscience Student Organization (NSO)
2018- 2019	Volunteer, Annual “Brain Blast” Outreach program with the Vanderbilt Brain Institute

Extramural Service

2024-present	Board Member , Notre Dame BRAIN Lab Community Advisory Board
2024- 2025	Judge and Chair for Elementary Life Sciences Committee for Northern Indiana Regional Science and Engineering Fair (2025), Judge (2024)
2023	Abstract Reviewer, National Conference on Undergraduate Research 2023
2021-2023	Steering Committee, Executive Committee, Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART) Nutrition, Metabolism and Dementia PIA (Professional Interest Area)
2021	Peer Reviewer, contributed to peer review for <i>Neurotoxicology</i> and <i>International Journal of Molecular Sciences</i>

Professional Development – Workshop, Conference, and Program Participation

2025	University of Notre Dame, ND Learning, Student and Faculty Voice Summit on AI in Education, November 2025
2025	University of Notre Dame, Kaneb Center for Teaching Excellence, “Academic Integrity on Written Assignments: Surveys and Solutions”, March 2025
2025	University of Notre Dame, Kaneb Center for Teaching Excellence, Teach@ND Day Keynote Speaker Dr. Cate Denial of Knox College, “A Pedagogy of Kindness”, February 2025
2024	Faculty Partner, Inclusive Pedagogy Partnership , Kaneb Center for Teaching Excellence, Fall Semester 2024

2024	Wake Forest University, Neuroscience Teaching Conference , virtual attendance, July 2024
2024 - 2025	Indiana University South Bend, Midwest Scholarship of Teaching and Learning (SoTL) Conference , in-person attendance, April 2024, April 2025
2024	University of Notre Dame, Kaneb Center for Teaching Excellence, “Design, Study, Publish: Scholarship of Teaching and Learning”, January 2024
2023	University of Notre Dame, Kaneb Center for Teaching Excellence, Teach@ND Day Keynote Speaker Dr. Bryan Dewsbury of Florida International University, “Beyond Inclusion: What Society Needs from Higher Education”, September 2023
2023	University of Notre Dame, Kaneb Center for Teaching Excellence, “Teaching in the Age of AI: Kick Off Panel”, August 2023
2023	University of Notre Dame, Kaneb Center for Teaching Excellence, “Equity-Oriented Pedagogy”, August 2023
2023	University of Notre Dame, Kaneb Center for Teaching Excellence, “Active Learning & Problem Solving”, August 2023
2023	University of Notre Dame, Kaneb Center for Teaching Excellence, “Course Design and Teaching Strategy” for new faculty, August 2023

Grants

2025	Faculty Advisor, undergraduate student S. Kang awarded funding from Glynn Family Honors Program (\$1,500) and Franco Family Institute for Liberal Arts and for the Public Good (\$1,500)
2021-2022	Postdoctoral Trainee, Vanderbilt Memory and Alzheimer’s Center (VMAC) Interdisciplinary Alzheimer’s Disease Training Program (NIH T32 AG058524)
2019	Recipient, Russell G. Hamilton Graduate Leadership Development Institute Travel Award to present at Alzheimer’s Association International Conference (AAIC)
2017-2019	Graduate Student Trainee, Environmental Toxicology Training Grant (NIH T32 ES007028)
2014	Recipient, Venture Grant to travel to and present research at Society for Neuroscience (SfN) international conference

Honors, Awards, and Scholarships

2024	Nu Rho Psi Honor Society, University of Notre Dame chapter Faculty NRP Member number γTN-4
2023	Nu Rho Psi Honor Society, Belmont University chapter Faculty NRP Member number γTN-4

2021	Awardee , Young Investigator Award for invited oral presentation at Society for Redox Biology and Medicine (SfRBM) annual international conference
2020	Awardee , Young Investigator Award for invited oral presentation at Society for Redox Biology and Medicine (SfRBM) annual international conference
2015	Awardee , Arnold B. Scheibel Neuroscience Award Institutional honor awarded to “ <i>the most outstanding neuroscience graduate</i> ”
2015	Phi Beta Kappa Society
2015	Psi Chi National Honor Society
2014	Mortar Board, Colorado College Pikes Peak Chapter
2012	Alpha Lambda Delta National Honor Society
2011-2015	Scholar, Jay D. Cayton & Betty G. Saunders Endowed Scholarship
2011-2015	Scholar, Woman’s Club of Colorado Springs
2011-2015	Dean’s List, Colorado College

PUBLICATIONS AND PRESENTATIONS:

*denotes co-first author

denotes corresponding author

Peer-Reviewed Research Articles

Tienda, A.A., Harrison, F.E. and **Wilcox, J.M.**[#] Vitamin C transport deficiency alters striatal dopamine gene expression and metabolism in YAC128 Huntington Disease mice. (2025) *Genes, Brain and Behavior*, 24. PMID: 40425486

Wilcox, J.M.[#], Consoli, D.C., Paffenroth, K.C., Spitznagel, B.D., Calipari, E.S., Bowman, A.B., and Harrison, F.E. Manganese-induced hyperactivity and dopaminergic dysfunction depend on age, sex and YAC128 genotype. (2022) *Pharmacology Biochemistry and Behavior*, 213. PMID: 35063467

Wilcox, J.M.^{*}, Pfalzer, A.C.^{*}, Tienda, A.T., Debbiche, I.F., Cox, E.C., Totten, M.S., Erikson, K.M., Harrison, F.E., and Bowman, A.B. YAC128 mouse model of Huntington disease is protected against subtle chronic manganese (Mn)-induced behavioral and neuropathological changes. (2021) *Neurotoxicology*, 87, 94-105. PMID: 34543681

Wilcox, J.M., Consoli, D.C., Dixit, S., Buchanan, R.A., May, J.M., Nobis, W.P., & Harrison, F.E. Altered synaptic glutamate homeostasis contributes to cognitive decline in young APP/PSEN1 mice. (2021) *Neurobiology of Disease*, 158. PMID: 34450329

Pfalzer, A.C.*, **Wilcox, J.M.***, Codreanu, S.G., Totten, M., Bichell, T.J.V., Halbesma, T., Umashanker, P., Yang, K.L., Parmalee, N.L., Sherrod, S.D., Erikson, K.M., Harrison, F.E., McLean, J.A., Aschner, M., and Bowman, A.B. Huntington's Disease genotype suppresses global manganese-responsive processes in pre-manifest and manifest YAC128 mice. (2020) *Metallomics*, 12, 1118-1130. PMID: 32421118

Book Chapters

“Transcription” in “Fundamentals of RNA Structure and Function”. 1st Ed (2022). Authors Rachel Wilson, Evgenia Shishkova, Chris Dickinson, **Jordyn M. Wilcox**, Natalie L. Nicholls, Andy J. Wowor, Hayden Low, Neena Grover, and Jennifer F. Garcia. Learning Materials in Biosciences. Springer, DOI: 10.1007/978-3-030-90214-8_10

“Vitamin C in neurological function and neurodegenerative disease” in “The New Odyssey of an Old Vitamin: Vitamin C”. 1st Ed (2020). Authors Shilpy Dixit, David Consoli, Krista Paffenorth, **Jordyn Wilcox**, and Fiona Harrison. The CRC Press, Taylor and Francis Group. DOI: 10.1201/9780429442025-10

Scientific Oral Presentations (Local)

- 2021 “Targeting the Exposome in Neurodevelopment and Neurodegeneration” Invited research talk, Belmont University
- 2020 “Manganese homeostasis disruption in a mouse model of Huntington's Disease” Neuroscience Research Forum, Vanderbilt Brain Institute, Vanderbilt University
- 2019 “Manganese as a therapeutic modifier of Huntington's Disease: Supplementation in the YAC128 mouse model” Neuroscience Research Forum, Vanderbilt Brain Institute, Vanderbilt University
- 2019 “Altered synaptic glutamate homeostasis underlies seizure-induced cognitive decline in young APP/PSEN1 mice” Vanderbilt Brain Institute Annual Retreat, Vanderbilt University

Scientific Oral Presentations (International)

- 2021 “Chronic manganese exposure induces hyperactivity and dopaminergic dysfunction in young C57Bl/6 mice” Invited talk, Society for Redox Biology and Medicine (SfRBM) annual international conference; recipient of 2021 Postdoctoral Fellow *Young Investigator Award* for this presentation.
- 2020 “Manganese differentially regulates dopaminergic dynamics and behavior in the YAC128 mouse model of Huntington's Disease” Invited talk, Society for Redox Biology and Medicine (SfRBM) annual international conference; recipient of 2020 Graduate Student *Young Investigator Award* for this presentation.

Pedagogy and Teaching Presentations (Regional)

- 2025 “Leveraging Student-Faculty Partnerships to Foster Inclusive Learning Experiences” Midwest Conference on the Scholarship of Teaching and Learning (SoTL), April 2025.

Webinars (International)

2022 Moderator and Organizer, ISTAART Journal Club: Meet the Author, Hosted by Nutrition, Metabolism and Dementia Professional Interest Area. October, 2022.

Invited Talks (Local)

2025 “How did I get here?” Notre Dame Association for Women in Science STEM Luncheon Series, April 2025

2022 “How I got here and the research I have done along the way.” Summer Undergraduate Research Fellowship in the Sciences (SURFS) Faculty Seminar, June 2022

Poster Presentations (Local)

2022 Alvarez, M., Crow, N., Grady, K., Medley, G., Westbrook, A., and **Wilcox, J. M.** *Effects of Repeated Acute Exposure to Blue Light in a Spatial Memory Task.* Belmont Science Undergraduate Research Symposium.

2022 Headapohl, S., Crause, E., Eddleman, D., Mathews, L., Spurlin, M., and **Wilcox, J. M.** *The Impacts of Reward Salience on Rate of Learning and Extinction Procedures.* Belmont Science Undergraduate Research Symposium.

2022 Arnold, R., Gheen, C., Gray, G., Huesmann, I., Orndorff, H., Toepfer, C., and **Wilcox, J. M.** *The Effects of Modeled Depression on Cognitive Flexibility in Rats.* Belmont Science Undergraduate Research Symposium.

2022 Klopatek, E., Harvey, B., Garrels, T., Frances, D., Tobolski, E., Lado, G., and **Wilcox, J. M.** *Investigating the Impact of Unlimited Sucrose During Adolescence on Flex Maze Performance in Rats.* Belmont Science Undergraduate Research Symposium.

2022 Potts, H., Cooke, K., and **Wilcox, J. M.** *Examining the Role of Excess Vitamin D and the Dopaminergic System in the Manifestation of ADHD-like Behaviors in Rats.* Belmont Summer Undergraduate Research Fellowship in the Sciences (SURFS) Poster Day (July, 2022) and College of Science and Mathematics (CSM) Summer Poster Session (September, 2022).

2022 Cooke, K., Potts, H., and **Wilcox, J. M.** *Investigating the Role of Acute High Levels of Vitamin D on Autism Spectrum Disorder-Associated Behaviors in Rats.* Belmont Summer Undergraduate Research Fellowship in the Sciences (SURFS) Poster Day (July, 2022) and College of Science and Mathematics (CSM) Summer Poster Session (September, 2022).

2021 **Wilcox, J. M.**, Tienda, A. A., Spitznagel, B. D., and Harrison, F. E. *Manganese exposure induces hyperactivity and dopaminergic dysfunction in young C57Bl/6 mice.* Vanderbilt Kennedy Center Science Day and Vanderbilt Postdoctoral Association Symposium.

2020 **Wilcox, J. M.**, Consoli, D. C., Debbiche, I., Calipari, E., Bowman, A. B., and Harrison, F. E. *Manganese differentially regulates dopaminergic dynamics and behavior in the YAC128 mouse model of Huntington's Disease.* Vanderbilt Alzheimer's Disease Research Day.

- 2019 **Wilcox, J. M.,** Pfalzer, A. C., Halbesma, T. Umashanker, P. Yang, K., Wegrzynowicz, M., Harrison, F. E., Erickson, K. M., & Bowman, A. B. *Chronic subcutaneous manganese suppresses motor performance decline in YAC128Q mice.* Inaugural Vanderbilt Alzheimer's Disease Research Day (May, 2019) and Vanderbilt Kennedy Center Science Day (September, 2019).
- 2019 **Wilcox, J. M.,** Consoli, D. C., Dixit, S., Nobis, W. P., May, J.M., & Harrison, F.E. *Altered synaptic glutamate homeostasis underlies seizure-induced cognitive decline in young APP/PSEN1 mice.* Vanderbilt Brain Institute Annual Retreat.
- 2018 **Wilcox, J. M.,** Pfalzer, A. C., Halbesma, T. Umashanker, P. Yang, K., Wegrzynowicz, M., Harrison, F. E., Erickson, K. M., & Bowman, A. B. *Chronic subcutaneous manganese suppresses motor performance decline in YAC128Q mice.* Vanderbilt Brain Institute Annual Retreat.
- 2015 **Wilcox, J. M.,** & Driscoll, L. L. *Effects of brief postnatal PBDE exposure GABA-dependent behaviors in the rat.* Colorado College Psychology & Neuroscience Research Day.

Poster Presentations (National/International)

- 2024 **Wilcox, J. M.** *Statistics that Stick: A Statistics in the Behavioral Sciences Portfolio Assignment to Promote Lasting Knowledge.* APA PsycLearn PsychTERMS (Teaching to Enhance Research Methods and Statistics in Psychology) Annual Conference, virtual.
- 2019 **Wilcox, J. M.,** Consoli, D. C., Dixit, S., Nobis, W. P., May, J.M., & Harrison, F.E. *Altered synaptic glutamate homeostasis underlies seizure-induced cognitive decline in young APP/PSEN1 mice.* Alzheimer's Association International Conference, Los Angeles, CA.
- 2018 **Wilcox, J. M.,** Pfalzer, A. C., Halbesma, T. Umashanker, P. Yang, K., Wegrzynowicz, M., Harrison, F. E., Erickson, K. M., & Bowman, A. B. *Chronic subcutaneous manganese suppresses motor performance decline in YAC128Q mice.* Hereditary Disease Foundation biennial conference, Cambridge, MA.
- 2018 **Wilcox, J. M.,** Pfalzer, A. C., Sepulveda, J. Magee, S., & Bowman, A. B. *Manganese exposure differentially alters expression of Slc30a10, S100a9, Dmt1, and Bdnf in a mouse model of Huntington's Disease.* Society of Toxicology Annual Meeting, San Antonio, TX.
- 2014 **Wilcox (Watts), J. M.,** & Driscoll, L. L. *Effects of brief postnatal PBDE exposure on GABA_A receptor function in the rat.* Midstates Consortium for Mathematics and Science Undergraduate Research Symposium at the University of Chicago, Chicago, IL.
- 2014 Driscoll, L. L., Beckett, E., Boese, J., **Wilcox (Watts), J.,** Sperry, J., & Kasemodel, R. *Hedonic reward and incentive salience in rats exposed postnatally to the polybrominated diphenyl ether commercial mixture DE-71.* Society for Neuroscience annual conference, Washington, DC.

Media Mentions (Local)

- 2025 Pedagogy presentation ("Leveraging Student-Faculty Partnerships to Foster Inclusive Learning Experiences") featured on the ND Learning website

2020 Research publication (*Metallomics 2020*, PMID: 32421118) featured in the Vanderbilt Center for Innovative Technology (CIT) Molecular Omics Spotlight