

Marisa C. Ross, PhD, MPA

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Northwestern University
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Academic Employment

Everytown for Gun Safety Postdoctoral Fellow, Institute for Policy Research (2021-present)
Northwestern University

Education

Doctor of Philosophy, Neuroscience, University of Wisconsin-Madison, Madison, WI (August 2021)
Master of Public Affairs, LaFollette School of Public Affairs, Madison, WI (May 2019)
Bachelor of Science, Biology, Duquesne University, Pittsburgh, PA (May 2016)
Bachelor of Arts, Psychology, Duquesne University, Pittsburgh, PA (May 2016)

Awards, Grants, and Training

- **Postdoctoral Research Fellow**, Everytown for Gun Safety Research Fund (2021 – Present)
- **Predoctoral Trainee**, National Institute of Mental Health Ruth L. Kirchstein National Research Service Award (2020-2021)
- **Exceptional Mentorship Award**, University of Wisconsin-Madison Undergraduate Research Scholars Program (2020-2021)
- **Predoctoral Trainee**, Training Program in Emotions Research, University of Wisconsin-Madison (2019-2020)
- **Neuroscience Training Program Graduate Student Travel Award** (2018)
- **Duquesne University Graduate with Distinction, Summa Cum Laude** (2016)
- **Honors Fellow**, Duquesne University Honors College (2015-2016)

Publications

Ross, M.C., Ochoa, E.M. & Papachristos, A.V. Violence intervention programming reduces the probability of arrests for violent crimes in a sample of high-risk men in Chicago. *In Preparation*.

Ross, M.C. Dr. Marisa Ross: Using social network science to prevent gun violence in Chicago. *Everytown Research & Policy: Safety in Numbers*. 14 June 2022. <https://everytownresearch.org/dr-marisa-ross-using-social-network-science-to-prevent-gun-violence-in-chicago/>

Crombie, K.M., Privratsky, A.A., Schomaker, C.M, Heilicher, M., **Ross, M.C.**, Sartin-Tarm, A., Sellnow, K., Binder, E.B., James, G.A. & Cisler, J.M. The influence of FAAH genetic variation on physiological, cognitive, and neural signatures of fear acquisition and extinction learning in women with PTSD. *Neuroimage: Clinical* (33), 2022

- Ross, M.C.**, Heilicher, M. & Cisler, J.M. Functional imaging correlates of childhood trauma: A qualitative review of past research and emerging trends. *Pharmacology, Biochemistry, and Behavior* (211), 2021
- Dvorak, D., Schomaker, C., **Ross, M.C.**, Matalamaki, M. & Cisler, J.M. Neural correlates of emotion processing in trauma-exposed adolescents: An investigation of structure-function relationships. *Under Revision, Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*.
- Ross, M.C.**, Cisler, J.M. & PGC-ENGIMA PTSD Working Group. Resolution-limit free community detection reveals unique patterns of resting-state network connectivity in posttraumatic stress disorder: A PGC-ENGIMA PTSD Consortium investigation. *In Preprint at medRxiv*, 2021.
- Ahrenholtz, R., Hiser, J., **Ross, M.C.**, Privratsky, A., Sartin-Tarm, A., James, G.A. & Cisler, J.M. Unique neurocircuitry profiles during fear conditioning and extinction among women with posttraumatic stress disorder. *Journal of Psychiatric Research* (141), 2021.
- Ross, M.C.**, Dvorak, D., Sartin-Tarm, A.S., Botsford, C., Cogswell, I., Hoffstetter, A., Putnam, O., Schomaker, C., Smith, P., Stalsberg, A., Wang, Y., Xiong, M. & Cisler, J.M. Gray matter volume correlates of adolescent posttraumatic stress disorder: A comparison of manual intervention and automated segmentation in FreeSurfer. *Psychiatry Research: Neuroimaging* (313), 2021.
- Ross, M.C.**, Sartin-Tarm, A.S., Letkiewicz, A.M., Crombie, K.M., & Cisler, J.M. Distinct cortical thickness correlates of early life trauma and posttraumatic stress disorder are shared among adolescent and adult females with interpersonal violence exposure. *Neuropsychopharmacology* (46): 2021.
- Crombie, K.M. **Ross, M.C.**, Letkiewicz, A.M., Sartin-Tarm, A.S., & Cisler, J.M. Differential relationships of PTSD symptom clusters with cortical thickness and gray matter volumes among women with PTSD. *Scientific Reports* (11), 2021.
- Sartin-Tarm, A., **Ross, M.**, Privratsky, A.A. & Cisler, J.M. Estradiol modulates neural and behavioral fear responding in women with posttraumatic stress disorder. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* (5), 2020.
- Ross, M.** & Cisler, J. Altered large-scale functional brain organization in posttraumatic stress disorder: A comprehensive review of univariate and network-level neurocircuitry models of PTSD. *NeuroImage: Clinical* (27), 2020.
- Cisler, J.M., Privratsky, A., Sartin-Tarm, A., Sellnow, K., **Ross, M.**, Weaver, S., Hahn, E., Herringa, R.J., James, G.A. & Kilts, C.D. L-DOPA and consolidation of fear extinction learning among women with posttraumatic stress disorder. *Translational Psychiatry* (10), 2020.
- Weaver, S., Kroska, E.B., **Ross, M.**, Sartin-Tarm, A., Sellnow, K., Schaumberg, K., Koenigs, M. & Cisler, J.M. Sacrificing reward to avoid threat: Characterizing PTSD in the context of a trauma-related approach-avoidance conflict task. *J. Abnormal Psychology* (129), 2020.
- Sellnow, K., Sartin-Tarm, A., **Ross, M.C.**, Weaver, S. & Cisler, J.M. Biotypes of functional brain engagement during emotion processing differentiate heterogeneity in internalizing symptoms and interpersonal violence histories among adolescent girls. *J Psychiatric Research* (121), 2020.
- Heyn, S.A., Keding, T.J., **Ross, M.C.**, Mumford, J.A. & Herringa, R.J. Abnormal frontolimbic development in pediatric posttraumatic stress disorder: A longitudinal structural and functional magnetic resonance imaging study. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* (4), 2019.
- Cisler, J.M., Esbensen, K., Sellnow, K., **Ross, M.**, Sartin-Tarm, A., Weaver, S., Herringa, R.J., & Kilts, C.D. Differential roles of the salience network in prediction error and threat detection among assaulted adolescent girls. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* (4), 2019.
- Ross, M.**, Lenow, J., Kilts, C & Cisler, J. Neural evidence for altered learning mechanisms in posttraumatic stress disorder. *J. Psychiatric Research* (103), 2018.

Academic Presentations

- Ross, M.C.**, Ochoa, E.M., & Papachristos, A.V. *Community Violence Intervention Programming Reduces Probability of Arrest for Violent Crimes in a Sample of High-Risk Men in Chicago*. Selected for oral presentation at the American Public Health Association annual meeting, Boston, MA, 8 November 2022.
- Ross, M.C.** *Trauma Response in the Brain and Body*. Presentation for Northwestern Neighborhood and Network Initiative, Evanston, IL, 21 February 2022.

- Ross, M.C.** *Evaluation of Novel and Classical Neurocircuitry Models of Posttraumatic Stress Disorder: Relationships Between Resting-State Network Organization and Regional Activation.* Doctoral Thesis Defense for UW-Madison Neuroscience and Public Policy Program, Madison, WI 26 July 2021.
- Ross, M.** & the PGC-ENIGMA PTSD Consortium. *Redefining Neurocircuitry Models of Posttraumatic Stress Disorder: An Investigation of Resting State Network Organization.* Virtual flash talk presented at the Society for Affective Science Annual Meeting 13-16 April 2021.
- Ross, M.** *Evaluating neurocircuitry models of posttraumatic stress disorder: A comparison of classical and network-based approaches.* Oral presentation for the University of Wisconsin-Madison Neuroscience Training Program Seminar Series, Madison, WI 12 October 2020.
- Ross, M. & Cisler, J.** *Altered salience network functional organization in adult females with posttraumatic stress disorder.* Poster presented at Organization for Human Brain Mapping Virtual Meeting, 24 June – 3 July 2020.
- Ross, M. & Cisler, J.** *Global intrinsic functional modularity modulates responding in threat-valenced spatial cueing.* Poster presented at Society of Biological Psychiatry Annual Meeting, Chicago, IL 17 May 2019.
- Ross, M.** *Reducing incarceration through scientific research: Policy options for funding research on mental illnesses related to incarceration.* Oral presentation for University of Wisconsin-Madison Neuroscience and Public Policy Program Seminar Series, Madison, WI 11 April 2019.
- Ross, M. & Cisler, J.** *Global intrinsic functional modularity modulates responding in threat-valenced spatial cueing.* Poster presented at Cognitive Neuroscience Society Annual Meeting, San Francisco, CA 25 March 2019.
- Ross, M. & Cisler, J.** *Neural evidence for altered learning mechanisms in posttraumatic stress disorder.* Poster presented at Society of Biological Psychiatry Annual Meeting, New York, NY 12 May 2018.

Public Policy Experience

LaFollette School of Public Affairs, Capstone Project (2019)

- Developed a project entitled “Analyzing Paid Family and Medical Leave Insurance in Wisconsin: Possible Costs and Effects” for a client
- Worked with a team to provide a literature review of state-level policies, cost assessment for Wisconsin, and develop a set of recommendations for implementation
- Worked with client to ensure needs were met

Community Services Technician, Office of Crime Victims Services, Wisconsin Department of Justice (05/2018 – 08/2018)

- Provided grants support for the Victims of Crime Act (VOCA) grant
- Assisted with outreach and needs assessments for subgrantee agencies
- Assisted with VOCA-SAC joint project for program evaluation
- Evaluated data collection tools and offered suggestions for improvement of performance management

Research and Technical Skills

Mixed-Methods Program Evaluation – Experience integrating and applying quantitative social science methods with content analysis from participant interviews and focus groups into holistic evaluations of community violence interventions.

Engaged Research Methods – Training and practical experience in designing and implementing engaged research practices with community partners in the gun violence prevention space. Experience discussing research design and results with violence intervention practitioners and incorporating partner feedback into research practice. Training in cultural humility and ethical considerations for

engaged research.

Neuroimaging Data Analysis – Proficiency in the use of Matlab neuroimaging toolboxes for graph- and ICA-based network neuroimaging and competency with coding functions and statistics in Matlab. Competency with AFNI Software for functional and structural MR image analysis and preprocessing alongside working knowledge of the Unix environment.

Statistical Programming and Analysis- Proficiency in the use of data analysis software, including R and Matlab. Experience with statistical design in linear mixed effects models, simple regression, interrupted time series design, Bayesian survival analysis, and synthetic control models.

Study Design and Administration- Experience reviewing scientific literature, designing, and proposing research studies. Experience in oversight, preparation for, and administration of clinical research studies with human participants.

Science Communication- Training in the preparation and presentation of scientific research posters, proposals and journal articles. Proficiency in composing scholarly review articles in the social and biological sciences. Experience communicating research to street outreach practitioners and other non-academic audiences.

Mentorship- Experience mentoring high school students, undergraduate students, and professional staff in individual projects. Guided mentees through data preparation, hypothesis generation, testing of hypotheses, interpretation of results, and presentation and communication of individual projects.

Policy Analysis- Experience conducting and presenting analyses of policy proposals on state and federal policy issues. Training in the design and evaluation of policy alternatives for issues including housing policy for domestic violence victims, improving outcomes for homeless and housing-instable children in Madison, WI, and best practices for funding mental health research for incarcerated populations.

Mentoring and Teaching Experience

Research Mentor, *UW-Madison Undergraduate Research Scholars Program, Madison, WI* (2020-2021)

Participant, *Research Mentor Training Seminar, University of Wisconsin-Madison, Virtual* (2020)

Seminar Facilitator, *Neuroscience and Public Policy Program Seminar Series, University of Wisconsin-Madison, Madison, WI* (2016-Present)

Teaching Assistant, *Neuroscience Training Program Seminar Series, University of Wisconsin-Madison, Madison, WI* (Fall 2018)

Leadership, Service, and Peer Review

Pen Pal, *Letters to a Pre-Scientist Program* (2021-2022)

Peer Mentor, *Neuroscience Training Program University of Wisconsin-Madison, Madison, WI* (2017-2020)

Outreach Volunteer, *WID Science Saturday, Madison, WI* (June 2017)

Tutor, *Duquesne University Volunteers, Pittsburgh, PA* (2013-2016)

Peer Review

- *Reviews in Neuroscience* – Reviewer, March 2022
- *Chronic Stress* – Reviewer, April 2021
- *American Journal of Psychiatry* – Ad Hoc Reviewer, January 2021
- *Neuroscience Letters* – Ad Hoc Reviewer, February 2020
- *Psychophysiology* – Ad Hoc Reviewer, October 2018

Professional Affiliations

- American Public Health Association (2022–present)
- Society for the Psychological Study of Social Issues (2022–present)
- American Academy for the Advancement of Science (2019–present)

- Organization for Human Brain Mapping (2019-2021)
- National Science Policy Network (2019-2021)
- Cognitive Neuroscience Society (2018-2019)