

Carissa W. Tomas, PhD

(formerly Carissa N. Weis)

updated December 2023

Assistant Professor

Department of Epidemiology & Social Sciences
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Medical College of Wisconsin
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Deputy Directory

Division of Data Surveillance and Informatics
Comprehensive Injury Center
Medical College of Wisconsin
Github: <https://github.com/carissawtomas>

EDUCATION

PhD	Neuroscience
2020	University of Wisconsin-Milwaukee, Milwaukee, Wisconsin (Advisor—Christine Larson, Ph.D.) Dissertation: <i>"Data-driven approach to dynamic resting state functional connectivity in Posttraumatic Stress Disorder"</i> https://carissa-weis.shinyapps.io/cw_dissertation_shinyapp/
MS	Neuroscience
2019	University of Wisconsin-Milwaukee, Milwaukee, Wisconsin (Advisor—Christine Larson, Ph.D.) Thesis: <i>"White Matter Integrity in Individuals At-Risk for PTSD Development: A Longitudinal Investigation"</i>
BS	Psychology & Mathematics
2016	Calvin College, Grand Rapids, MI

FACULTY APPOINTMENTS

2021-present	Assistant Professor (tenure-track) Department of Epidemiology and Social Sciences, Institute of Health and Equity Medical College of Wisconsin
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RESEARCH APPOINTMENTS

2021-present	Deputy Director and Data Scientist , Division of Data Surveillance and Informatics Comprehensive Injury Center, Medical College of Wisconsin Milwaukee Trauma Outcomes Project
Jan – July 2021	Postdoctoral Research Fellow Affective Neuroscience Lab, UWM, Director: Christine Larson
2016-2020	Graduate Research Assistant Affective Neuroscience Lab, UWM, Director: Christine Larson

AWARDS AND HONORS

Society for Biological Psychiatry, Early Career Investigator Travel Award | December 2023
UWM Distinguished Dissertator Fellowship | August 2020-May 2021
UWM Summer Graduate Research Fellowship | Summer 2020
UWM Distinguished Graduate Student Fellowship | August 2019-May 2020

UWM Summer Graduate Research Fellowship | Summer 2017
 UWM Chancellor's Graduate Student Award | August 2016-May 2018
 Calvin Honors Program Member | August 2013-May 2016
 Calvin Presidential Scholar | August 2013-May 2016
 Calvin Dean's List | Fall 2013-Spring 2016
 Calvin Honors Fellows Scholar | August 2013-Spring 2015
 Siemens Special Scholarship Recipient | August 2013
 AP Scholar with Distinction | August 2013

GRANTS

Title: *Structural Discrimination and Health Outcomes in Milwaukee at the Community and Individual Level*
 Source: Advancing a Healthier Wisconsin
 MCW-Led Collaborative Research for Improved Health
 Role: Co-investigator (**Tomas**)
 Amount: \$200,000
 Dates: 7/1/2022-1/4/2024

Title: *The role of context in the epidemiology of injury*
 Source: Advancing a Healthier Wisconsin
 Mentored Career Development Program (KL2TR001438)
 Role: Principal investigator (**Tomas**)
 Amount: \$486,530
 Dates: 1/4/2022-1/4/2025

Title: *The Influence of Biological Vulnerability and Neighborhood Disadvantage on Post-Traumatic Stress Disorder*
 Source: American Psychological Foundation/Division 56 Trauma Psychology Grant
 Role: Co-investigator (PIs: **Weis**, Webb)
 Amount: \$3,000
 Dates: 6/21/2021-6/20/2022

PEER REVIEWED PUBLICATIONS

*co-first author; **co-senior author; † student/trainee

Brandolino, A. †, deRoos-Cassini, T.A., Biesboer, E.A. †, **Tomas, C.W.**, Woolfolk, M. †, Wakinekona, N. †, Subramanian, M. †, Cheruvalath, H. †, Schroeder, M.E., Trevino, C.M. (*in press*) Improved Follow-up Care for Gun Violence Survivors in the Trauma Quality of Life Clinic. *Trauma Surgery & Acute Care Open*.

Bird, C.M., Webb, E.K., Cole, S.W., **Tomas, C.W.**, Knight, J.M., Timmer-Murillo, S.C., Larson, C.L., deRoos-Cassini, Torres, L. (*in press*) Individual Experiences of Racial Discrimination and Adverse Gene Expression among Black Individuals in a Level 1 Trauma Center Sample. *Brain, Behavior, and Immunity*. 10.1016/j.bbi.2023.12.009

Bennett, M. M. †, **Tomas, C. W.**, Fitzgerald, J. M. (2023) Relationship between cortisol and heart rate variability in response to stress: a data-driven approach. *Stress and Health*. 10.1002/smi.3327.

Dove, A.†, Kallies, K.†, Hargarten, S., **Tomas, C.W.** (2023) A Milwaukee Syndemic: Penetrative Injury and the COVID-19 Pandemics. *Wisconsin Medical Journal*.

Tomas, C.W., Fumo, N., Kostelac, C.A., Flynn-O'Brien, K., Levas, M., deRoos-Cassini, T.A., Hargarten, S. (2023) Trends in firearm production and firearm deaths in children. *Preventive Medicine*. 10.1016/j.ypmed.2023.107684

Davis, K.E.†, **Tomas, C.W.**, Webb, E.K., Huggins, A.A., deRoos-Cassini, T.A., Larson, C.L., Fitzgerald, J.M. (2023) Neural processes of emotional conflict monitoring and prediction of PTSD symptom clusters in traumatic injury survivors. *Psychological Trauma: Theory, Research, Practice, and Policy*. 10.1037/tra0001586

Schramm, A. T., Kant, J.†, M., **Tomas, C. W.**, Holliman, A. R., Kendrick, V. T., Khan, H., Cronn, S., deRoos-Cassini, T.A., Kohlbeck, S.A. (2023) Trends in adult suicide rates in Milwaukee County, Wisconsin: 2002-2020. *Wisconsin Medical Journal*. PMID: 37768767

Timmer-Murillo, S., Melin, S.J.H.†, **Tomas, C.W.**, Geier, T., Brandolino, A., Schramm, A., Larson, C.L., & deRoos-Cassini, T. (2023) Health disparities following firearm violence: A brief report. *Annals of Internal Medicine*. 10.7326/M23-0309

Webb, E.K., Timmer-Murillo, S.C., Huggins, A.A., **Tomas, C.W.**, deRoos-Cassini, T.A., Larson, C.L. (2023) Attributional negativity bias and acute stress disorder symptoms mediate the relationship between trauma history and future PTSD. *Journal of Traumatic Stress*. 10.1002/jts.22942.

Suarez-Jimenez, B., Lazarov, A., Zhu, X., Zilcha-Mano, S., Kim, Yoojean, Marino, C.E., Rjabtsenkov, P., Bavdekar, S.Y., Pine, D.S., Bar-Haim, Y., Larson, C.L., Huggins, A.A., deRoos-Cassini, T., **Tomas, C.**, Fitzgerald, J., Kennis, M., Varkevisser, T., Geuze, E., QUIDE, Y., El Hage, W., Wang, X., O'Leary, E.N., Cotton, A.S., Xie, H., Shih, C., Disner, S.G., Davenport, N.D., Sponheim, S.R., Koch, S.B.J., Frijling, J.L., Nawijn, L., van Zuiden, M., Olff, M., Veltman, D.J., Gordon, E.M., May, G., Nelson, S.M., Jia-Richards, M., Neria, Y., Morey, R.A. (2023). Intrusive traumatic re-experiencing domain: Functional connectivity feature classification by the ENIGMA PTSD Consortium. *Biological Psychiatry: Global Open Science*. 10.1016/j.bpsgos.2023.05.006

Tomas, C.W., Kallies, K.J., Cronn, S.E., Kostelac, C.A., deRoos-Cassini, T.A., Cassidy, L.D. (2023) Mechanisms of traumatic injury by race and ethnicity: an 8-year review of temporal trends from the National Trauma Data Bank. *Injury Prevention*. 10.1136/ip-2022-044817.

Tomas, C.W., Flynn-O'Brien, K.T., Harris, J., Moore, R., Kostelac, C., Cassidy, L.D., deRoos-Cassini, T.A. (2023) The increase in traumatic injury burden during COVID-19 was disproportionately shouldered by racial and ethnic minority patients: an urban case study. *Trauma*. 10.1177/14604086231165127

Gonzalez-Van Wart, A. E.†, Pina, I.G.†, Melin, S.†, Webb, E.K., Larson, C.L., **Tomas, C.W.** (2022) Helping self & helping others: Motivation & benefits to participation in trauma-related research. *Trauma Psychology News*, 17(3), 34-38. <https://traumapsychnews.com/2022/11/helping-self-helping-others/>

Stevens, S.K.†, Timmer-Murillo, S., **Tomas, C.W.**, Boals, A., Larson, C.L., deRoos-Cassini, T.A., Larsen, S.E.

(2022). Event Centrality and Posttraumatic Stress After Traumatic Injury: A Longitudinal Investigation. *Journal of Traumatic Stress*. 10.1002/jts.22877

Tomas, C.W., Fitzgerald, J.M., Bergner, C., Hillard, C.J., Larson, C.L., deRoos-Cassini, T.A. (2022). Machine learning prediction of PTSD trajectories following traumatic injury: identification and verification in two independent samples. *Journal of Traumatic Stress*. 10.1002/jts.22868.

Tomas, C.W., Webb, E.K., Bennett, K.P., Huggins, A.A., Fitzgerald, J.M., Miskovich, T.A., Krukowski, J., deRoos-Cassini, T.A., Larson, C.L. (2022). Neighborhood socioeconomic disadvantage and the neurobiology of uncertainty in traumatically injured adults. *Biological Psychiatry: Global Open Science*. 10.1016/j.bpsgos.2022.02.006

Webb, E.K.*, Ward, R.T.*, Mathew, A.S., Price, M., **Weis, C.N.,** Trevino, C.M., Larson, C.L.** & deRoos-Cassini-T.A.**. (2022). Role of pain and socioenvironmental factors on PTSD symptoms in traumatically injured adults: A one-year prospective study. *Journal of Traumatic Stress*. 10.1002/jts.22815

Webb, E.K., Bird, C.M., deRoos-Cassini, T.A., **Weis, C.N.,** Huggins, A., Fitzgerald, J., Miskovich, T., Bennett, K., Krukowski, J., Torres, L., Larson, C.L. (2022). Racial discrimination is associated with modified functional connectivity of salience network nodes in traumatically injured adults. *JAMA Network Open*. 10.1001/jamanetworkopen.2021.44759

Weis, C. N., Huggins, A. A., Miskovich, T. A., Fitzgerald, J. M., Bennett, K. P., Krukowski, J. L., Webb, E. K., deRoos-Cassini, T. A., Larson, C. L. (2021). Acute white matter integrity post-trauma and prospective PTSD symptoms. *Frontiers in Human Neuroscience*. doi: 10.3389/fnhum.2021.742198.

Fitzgerald, J.M.*, Webb, E.K.*, **Weis, C.N.,** Huggins, A.A., Bennett, K.P., Miskovich, T.A., Krukowski, J.L., deRoos-Cassini, T.A.** & Larson, C.L.** (2021). Hippocampal Resting-State Functional Connectivity Forecasts Individual PTSD Symptoms: A Data-Driven Approach. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*. doi: 10.1016/j.bpsc.2021.08.007

Webb, E.K.*, **Weis, C.***, Bennett, K., Huggins, A., Parisi, E., Hanson, J., deRoos-Cassini, T.A., & Larson, C. (2021) Neural impact of neighborhood socioeconomic disadvantage in traumatically injured adults. *Neurobiology of Stress*. doi:10.1016/j.ynstr.2021.100385

Weis, C.N., Webb, E.K., deRoos-Cassini, T.A., Larson, C.L. (2021) Emotion Dysregulation Following Trauma: Shared Neurocircuitry of Traumatic Brain Injury and Trauma-Related Psychiatric Disorders. *Invited review for TBI special issue at Biological Psychiatry*. doi: 10.1016/j.biopsych.2021.07.023

Weis, C. N., Bennett, K. P., Huggins, A. A., Parisi, E. A., Gorka, S. A., Larson, C. L. (2021) A high-resolution 7-Tesla MRI study of the periaqueductal grey–resting state functional connectivity and task activation under uncertain threat. *Social Cognitive and Affective Neuroscience*. doi:10.1093/scan/nsab085

Huggins, A. A., **Weis, C. N.,** Parisi, E. A., Bennett, K.P., Miskovich, V. & Larson, C. L. (2021). Neural substrates of human fear generalization: A 7T-fMRI investigation. *Neuroimage*. doi:10.1016/j.neuroimage.2021.118308

Weis, C.N.*, Webb, E.K.*, Huggins, A. A., Kallenbach, M., Miskovich, T. A., Fitzgerald, J. M., Bennett, K. P., Krukowski, J. L., deRoos-Cassini, T.**, Larson, C.L.** (2021) Stability of hippocampal subfield volumes after trauma and relationship to development of PTSD symptoms. *Neuroimage*. 236. doi:10.1016/j.neuroimage.2021.118076

Weis, C. N., Webb, E.K., Damiano, S., Larson, C. L., deRoos-Cassini, T.A. (2021) Scoring the Life Events Checklist: comparison of three scoring methods. *Psychological Trauma: Theory, Research, Practice, and Policy*. doi:10.1037/tra0001049

Webb, E.K., **Weis, C.**, Huggins, A., Parisi, E., Bennett, K., Miskovich, T., Krukowski, J., deRoos-Cassini, T.A., & Larson, C. (2021) Neighborhood disadvantage is associated with stable deficits in neurocognitive functioning. *Health and Place*. 67. doi:10.1016/j.healthplace.2020.102493

Weis, C. N., Huggins, A. A., Bennett, K. P., Parisi, E. P., Larson, C. L. (2019). High Resolution Resting State Functional Connectivity of the Extended Amygdala. *Brain Connectivity*. 9(8). doi:10.1089/brain.2019.0688

Weis, C. N., Belleau, E. L., Pedersen, W. S., Miskovich, T. A., Larson, C. L. (2018). Structural Connectivity of the Posterior Cingulum is related to Reexperiencing Symptoms in PTSD. *Chronic Stress*. doi:10.1177/2470547018807134

MANUSCRIPTS UNDER REVIEW

Kohlbeck, S., **Tomas, C.W.**, Schramm, A., Bassing-Sutton, S., Hargarten, S. (*under review*). Measuring Distress in the Community During the COVID-19 Pandemic: Leveraging 911 Data.

Webb, E. K., Torres, L., **Tomas, C.W.**, Huggins, A., Fitzgerald, J., Bennett, K., Miskovich, T., Krukowski, J.L., Lee, H.J., deRoos-Cassini, Larson, C.L. (*under review*). Neighborhood Socioeconomic Disadvantage and White Matter Tract Integrity: Exploring Racial-Ethnic Identity as a Buffer.

Sullivan, R.M., Wallace, A.L., **Tomas, C. W.**, Wirtz, H.G., Larson, C.L., Lisdahl, K.M. (*under review*) Appetitive face BOLD response and task-dependent ventral striatal functional connectivity among abstinent cannabis-using adolescents and young adults

Zapata, J.†, **Tomas, C.W.**, Timmer-Murillo, S., deRoos-Cassini, T.A., Larson, C.L., Torres, L., Geier, T., Khan, H., Schramm, A. (*under review*) The effect of COVID-19 distress following traumatic injury: an empirical comparison of pre- and peri-pandemic distress.

Torres, L., Geier, T.J. **Tomas, C.W.**, Bird, C.M., Timmer-Murillo, S., Larson, C.L., deRoos-Cassini, T.A. (*under review*) Racial discrimination and trauma trajectories: Latent profile analysis.

Pahapill, P.A., Arocho-Quinones, E., Chen, G., Swearingen, C., **Tomas, C.**, Koch, K., Nencka, A. (*under review*) Distinct functional connectivity patterns for intermittent vs. constant neuropathic pain phenotypes in PSPS Type 2 patients.

Mohebbi, F., Forati, A., Torres, L., deRoos-Cassini, T., Harris, J., **Tomas, C.**, Mantsch, J., Ghose, R. (*under review*)

review) Exploring the association between structural racism and mental health through a novel framework using machine learning and geospatial analysis.

ORAL PRESENTATIONS

- Tomas, C.W.** (2023) Contextual factors of traumatic injury in Milwaukee. *Health Psychology Fellow Didactic Series*, Medical College of Wisconsin, Milwaukee, WI.
- Tomas, C.,** Kallies, K., Borisy-Rudin, F., Busalacchi, M., Mackenzie, R., Snowden, A., deRoos-Cassini, T., Kostelac, C. (2023) *Off-premises alcohol outlets and socioeconomic status predict firearm-related injury in Milwaukee, WI*. Oral presentation at the National Research Conference for the Prevention of Firearm-Related Harms. Chicago, IL.
- Krukowski, J., Harris, J., Timmer-Murillo, S., **Tomas, C.,** Vine, K., Purdle, S., Janusiak, J., Mohebbi F., Masoud Forati, A., Ghose R, Mantsch, J., Torres, L., deRoos-Cassini, T. (2023). Need to Address Trauma Exposure and Mental Health for Those Seeking Emergency Rental Assistance. Flash talk accepted for presentation at the 39th at *International Society of Traumatic Stress Studies*. Los Angeles, CA.
- Tomas, C.W.** (2023) Injury Burden in Milwaukee During COVID-19. Ignite Presentation at *Data Day 2023*, Data You Can Use, Milwaukee, WI.
- Tomas, C.W.** (2022) Contextual factors of traumatic injury in Milwaukee. *Center for Advancing Population Science Seminar*, Medical College of Wisconsin, Milwaukee, WI.
- Stevens, S.K., Timmer-Murillo, S., **Weis, C.N.,** Boals, A., Larson, C.L., deRoos-Cassini, T., Larsen, S.E. (2022) Event Centrality and Posttraumatic Stress After Traumatic Injury: A Longitudinal Investigation. Flash talk accepted for presentation at the 38th annual meeting of the *International Society for Traumatic Stress Studies* in Atlanta, GA.
- Nasir, S., Bennett, M., **Tomas, C.,** Fitzgerald, J.M. Relationship between cortisol and heart rate variability in response to stress: A data-driven approach. *MidBrains*, October 22, 2022. Eau Claire, WI.
- Webb, E.K., **Weis, C.,** Huggins, A., Bennett, K., Miskovich, T., Krukowski, J., deRoos-Cassini, T., & Larson, C. (2021). Neighborhood socioeconomic disadvantage alters neural responding during cognitive and affective tasks: evidence for adaptive processes. *Anxiety & Depression Association of American annual meeting*, Denver, CO.
- Weis, C. N.** (2021) Introduction to fMRI: MR Physics and the BOLD signal. *UWM fMRI Bootcamp hosted by Cognition Learning Attention and Memory Society*.
- Weis, C. N.** (2021) HALPipe application in ENIGMA-PGC-PTSD. *The ENIGMA Consortium All-Hands eMeeting*.
- Webb, K., **Weis, C.,** Bennett, K., Huggins, A., Parisi, E., Miskovich, T., Kallenbach, M., Krukowski, J., Fitzgerald, J., deRoos-Cassini, T., & Larson, C. (2021). Neural Impact of Neighborhood Disadvantage in Traumatically-Injured Adults: A Multi-Modal Investigation. *Society for Biological Psychiatry's Virtual Meeting*.

Weis, C. Trauma, PTSD, and Brain Network Dynamics. (April, 2020) UWM Three Minute Thesis (3MT) Competition Finalist.

Weis, C., Huggins, A. A., Fitzgerald, J. M., Miskovich, T. A., Bennett, K. P., Parisi, E.A., Webb, K., deRoos-Cassini, T. A., & Larson, C. L. (March 13, 2020) Data-driven approach to dynamic resting state functional connectivity in individuals at-risk for PTSD development. UWM Neuroscience Research Symposium. Milwaukee, WI.

Weis, C. N. Introduction to R. (October 15th and 29th, 2019) UWM Psychology Department Neuroimaging Journal Club.

Weis, C., Huggins, A. A., Miskovich, T. A., Fitzgerald, J. M., Bennett, K. P., deRoos-Cassini, T. A., & Larson, C. L. (March 15, 2019) White matter integrity in individuals at-risk for PTSD development: a longitudinal investigation. UWM Neuroscience Research Symposium. Milwaukee, WI.

Weis, C. N., Blujus, J. K. Diffusion Tensor Imaging Workshop. (April 9, 2018) UWM Psychology Department Neuroimaging Journal Club. April 9, 2018.

Weis, C., Belleau, E., Pedersen, W., Miskovich, T., Larson, C. (March 16, 2018) Structural Connectivity of the Posterior Cingulum is related to Re-Experiencing Symptoms in PTSD. UWM Neuroscience Research Symposium. Milwaukee, WI.

Weis, C., Drost, C., Rootring, E., Moes, P. (May, 2016) Hemispheric Lateralization of Processing Gender and Emotion. Michigan Undergraduate Psychology Research Conference. May 2016. Adrian, MI.

POSTER PRESENTATIONS

Brandolino, A., Campbell, K.M.B., Lopez-Blasini, L., **Tomas, C.W.**, & Kostelac, C. *Phase 1 Evaluation of the Community Component of 414LIFE - Milwaukee's Community Gun Violence Prevention and Intervention Program*. Poster presented at the annual Medical College of Wisconsin Community Engagement Poster Session, Milwaukee, WI.

Brandolino, A., Campbell, K., Lopez-Blasini, L., **Tomas, C.**, Hopkins, S., Hall, C., Butler, J., Lewis, L., Kostelac, C. (2023) *Phase 1 Evaluation of the Community Component of 414LIFE - Milwaukee's Community Gun Violence Prevention and Intervention Program*. Poster presentation at the National Research Conference for the Prevention of Firearm-Related Harms. Chicago, IL

Tomas, C.W., Fumo, N., Kostelac, C.A., Flynn-O'Brien, K., Levas, M., deRoos-Cassini, T.A., Hargarten, S. (2023). Trends in firearm production and firearm deaths in children. *American Public Health Association Annual Meeting*, Atlanta, GA.

Kallies, KJ, Cassidy, L., Kostelac, C, deRoos-Cassini, TA, **Tomas, C.W.** (2023). Traumatic Injuries by Area Deprivation Index and Social Vulnerability Index in Milwaukee County. *American Public Health Association Annual Meeting*, Atlanta, GA.

Brandolino, A., **Tomas, C.W.** (2023). The clinical impact of COVID-19 on hospitalization course and patient population trends for gunshot wound patients at a midwestern level 1 trauma center. *American Public Health Association Annual Meeting*, Atlanta, GA.

- Vine, K., **Tomas, C.**, Timmer-Murillo, S, Torres, L, Krukowski, J, Purdle, S, Janusiak, J, Harris, J, Mohebbi, F, Masoud Forati, A, Mantsch, J, Ghose, R, deRoos-Cassini, T. (2023). Coping alone: The moderating role of social support in the relationship between ethnic discrimination and substance use. *American Public Health Association Annual Meeting*, Atlanta, GA.
- Purdle, S., Harris, J., Krukowski, J., Janusiak, J., Forati, A., Mohebbi, F., Vine, K., Timmer-Murillo, S., **Tomas, C.** Ghose, R., Mantsch, J., Torres, L., deRoos-Cassini, T. (2023). Promoting health policy through community-based participatory research. *American Public Health Association Annual Meeting*, Atlanta, GA.
- Mohebbi, F., Masoud Forati, A., Janusiak, J., Timmer-Murillo, S, **Tomas, C.**, Krukowski, J, Harris, J, Torres, L, Mantsch, J, Purdle, S, Ghose, R, deRoos-Cassini, T, Vine, K, Larson, C. (2023). Exploring the association between structural racism and mental health: A novel framework using deep learning and geospatial analysis. *American Public Health Association Annual Meeting*, Atlanta, GA.
- Janusiak, J., Timmer-Murillo, S., **Tomas, C.**, Krukowski J., Larson, C., Harris, J., Torres, L., Mantsch, J., Masoud Forati, A., Mohebbi, F., Vine, K., Purdle, S., Ghose, R., deRoos-Cassini, T. (2023) Associations between everyday discrimination experiences and PTSD symptomology in black Americans in Milwaukee-Wisconsin: A sub-analysis of the DRIVE study. *American Public Health Association Annual Meeting*, Atlanta, GA.
- Tomas, C.W.**, Fumo, N. Kostelac, C.A., Flynn-O'Brien, K. Moore, R., Levas, M., deRoos-Cassini, T.A., Hargarten, S. (2023) Trends in firearm sales and firearm deaths in Wisconsin. *Wisconsin Public Health Association Annual Meeting*, Middleton, WI.
- Tomas, C.W.**, Geier, T., deRoos-Cassini, T.A., Larson, C.L., Torres, L. (2023) Racial discrimination increases risk of non-remitting PTSD symptoms in traumatically injured Black adults. *78th Society of Biological Psychiatry Annual Meeting*, San Diego, CA.
- Timmer-Murillo, S., **Tomas, C.W.**, Wang, A., Palm, K., deRoos-Cassini, T.A., Larson, C.L. (2023) Does pro-inflammatory cytokine response predict posttraumatic symptom trajectory acutely after trauma? *78th Society of Biological Psychiatry Annual Meeting*, San Diego, CA.
- Tomas, C.W.**, Kallies, K., Kostelac, C.A., deRoos-Cassini, T.A., Cassidy, L.D. (2023) Firearm Injuries and Area Deprivation: Impact on Hospital Outcomes. *Society for Advancement of Violence and Injury Research Annual Meeting*, Denver, CO.
- Dove, A., Kallies, K., Hargarten, S., **Tomas, C.** (2023) A Milwaukee Syndemic: Penetrative Trauma Incidents and the COVID-19 Pandemic. *31st Annual Wisconsin Emergency Medicine Research Forum*, Madison, WI.
- Tomas, C.W.**, Kostelac, C.A., deRoos-Cassini, T.A. (2022) Racial and ethnic disparities in firearm injury during COVID-19 in a Midwestern Metropolitan Area. *National Research Conference for Firearm Injury Prevention*, Washington, D.C.
- Tomas, C.W.**, Flynn-O'Brien, K. T., Cassidy, L.D., deRoos-Cassini, T.A. (2022) The impact of COVID-19 on

traumatic injury burden by race and ethnicity. *38th Annual International Society of Traumatic Stress Studies*, Atlanta, GA.

Piña, I.G., Larson, C.L., deRoos-Cassini, T.A., **Tomas, C.W.** (2022). Trajectories of Anhedonia After Traumatic Injury. *38th Annual International Society for Traumatic Stress Studies*, Atlanta, GA.

Tomas, C.W., Cronn, S.E., Kallies, K.J. Kostelac, C.A., deRoos-Cassini, T.A., Cassidy, L.D. (2022) Mechanisms of traumatic injury by race and ethnicity: an 8-year review of temporal trends in the National Trauma Data Bank. *American Public Health Association Annual Meeting*, Boston, MA.

Pahapill, P., Arocho-Quinones, E., Chen, G., Nencka, A., Swearingen, B., **Weis, C.**, Koch, K., Li, S-J. (2022). Altered functional connectivity patterns correlated with different chronic back pain phenotypes are predictive of spinal cord stimulation outcomes in failed back surgery syndrome patients. *International Neuromodulation Society*, Barcelona, Spain.

Tomas, C.W., Webb, E.K., Bennett, K.P., Huggins, A.A., Fitzgerald, J.M., Miskovich, T.A., Krukowski, J., deRoos-Cassini, T.A., Larson, C.L. (2022). Neighborhood socioeconomic disadvantage and the neurobiology of uncertainty in traumatically injured adults. *77th Society of Biological Psychiatry Annual Meeting*, New Orleans, LA; *Organization of Human Brain Mapping*, Glasgow, Scotland.

Weis, C.N., Fitzgerald, J.M., Bergner, C., Hillard, C.J., Larson, C.L., deRoos-Cassini, T.A. (2021, November). Characterizing PTSD symptom trajectories in two independent traumatically injured samples. *International Society of Traumatic Stress Studies*, virtual.

Weis, C.N., Haswell, C., Clarke-Rubright, E., Jahanshad, N., Gordon, E., Waller, L., Buettner, M., Pozzi, E., Toenders, Y., Larson, C., Schmaal, L., Veer, I, Thompson, P., Morey, R. (2021, June). Data-driven approach to dynamic resting state functional connectivity: an ENIGMA-PGC PTSD study. *Organization of Human Brain Mapping*, virtual.

Weis, C.N., Bergner, C., Hillard, C.J., Larson, C.L., deRoos-Cassini, T.A. (2021, May). Using machine learning to predict non-remitting PTSD symptoms in two independent traumatically injured samples. *76th Society of Biological Psychiatry Annual Meeting*, virtual.

Fitzgerald, J.M.*, Webb, E.K.*, **Weis, C.N.**, Huggins, A.A., Bennett, K.P., Miskovich, T.A., Krukowski, J.L., deRoos-Cassini, T.A.**, Larson, C.L.** (2021, May). Hippocampus Resting-State Functional Connectivity Forecasts Individual PTSD Symptoms: A Data-Driven Approach. *76th Society of Biological Psychiatry Annual Meeting*, virtual. *joint first authors, **joint senior authors.

Huggins, A. A., Fitzgerald, J., **Weis, C. N.**, Hanson, J., Webb, E. K., Bennett, K. P., Parisi, E. A., deRoos-Cassini, T. A., & Larson, C. L. (2021, May). Neural activation during fear extinction acutely post-trauma predicts chronic PTSD severity. *76th Society of Biological Psychiatry Annual Meeting*, virtual.

Webb, K., **Weis, C.**, Huggins, A., Kallenbach, M., Miskovich, T., Fitzgerald, J., Bennett, K., Krukowski, J., deRoos-Cassini, T., Larson, C. (2021, January). Stability of hippocampal subfield volumes after trauma and relationship to development of PTSD symptoms. *SfN Global Connectome*.

- Weis, C. N.,** Huggins, A. A., Fitzgerald, J. M., Miskovich, T. A., Bennett, K. P., Parisi, E.A., Webb, K., deRoos-Cassini, T. A., & Larson, C. L. (2020, June) Data-driven approach to dynamic resting state functional connectivity in individuals at-risk for PTSD development. *Organization of Human Brain Mapping*. Montreal, Canada.
- Huggins, A. A., **Weis, C. N.,** Parisi, E. A., Bennett, K. P., & Larson, C. L. (2020, June). High-resolution 7T-fMRI of human hippocampal subfields during threat generalization. *Organization of Human Brain Mapping*. Montreal, Canada.
- Weis, C. N.,** Huggins, A. A., Bennett, K. P., Parisi, E. A., Larson, C. L. (2020, April) Dynamic functional connectivity of the periaqueductal grey in response to predictable and unpredictable threat using 7-Tesla MRI. *75th Society of Biological Psychiatry Annual Meeting*. New York, NY.
- Fitzgerald, J.M., Huggins, A.A., **Weis, C.,** Hanson, J., Bennett, K., Parisi, E., Webb, E.K., Larson, C., deRoos-Cassini, T. (2020, May) Differences in Endocannabinoids Relates to Intact Fear Learning After Traumatic Injury. *75th Society of Biological Psychiatry Annual Meeting*. New York, NY.
- Huggins, A. A., **Weis, C. N.,** Fitzgerald, J., Hanson, J., Bennett, K. P., Parisi, E. A., Webb, E. K., deRoos-Cassini, T., & Larson, C. L. (2020, May). Contingency awareness and neural response to threat: Associations with acute traumatic distress and childhood trauma. *75th Society of Biological Psychiatry Annual Meeting*. New York, NY.
- Webb, E.K., **Weis, C. N.,** Huggins, A., Hanson, J., Sellnow, K., deRoos-Cassini, T., & Larson, C. (2020, May). *Neighborhood disadvantage is associated with smaller amygdala volume and altered amygdala functional activity*. *75th Society of Biological Psychiatry Annual Meeting*, New York, NY.
- Weis, C. N.,** Huggins, A. A., Bennett, K. P., Parisi, E. A., Larson, C. L. (2019, October) Resting state functional connectivity of the human periaqueductal grey using 7-Tesla MRI. *49th Society for Neuroscience Annual Meeting*. Chicago, IL.
- Weis, C. N.,** Huggins, A. A., Bennett, K. P., Parisi, E. A., Larson, C. L. (2019, June) High resolution resting state functional connectivity of the extended amygdala. *Organization of Human Brain Mapping*. Rome, Italy.
- Weis, C. N.,** Huggins, A. A., Miskovich, T. A., Fitzgerald, J. M., Bennett, K. P., deRoos-Cassini, T. A., & Larson, C. L. (2019, May) White matter integrity in individuals at-risk for PTSD development: a longitudinal investigation. *74th Society of Biological Psychiatry Annual Meeting*. Chicago, IL.
- Hunt, J. C., Fitzgerald, J. F., **Weis, C. N.,** Huggins, A. A., Hanson, J. L., Isely, K. A., deRoos-Cassini, T. A., Larson, C. L. (2019, May) Classification of Mild Traumatic Brain Injury from Resting State fMRI: A Graph Theory Approach. *74th Society of Biological Psychiatry Annual Meeting*. Chicago, IL.
- Huggins, A. A., **Weis, C. N.,** Parisi, E. A., Bennett, K. P., & Larson, C. L. (2019, May) Trait anxiety associated with differences in BOLD activation during fear generalization task. *74th annual meeting of the Society of Biological Psychiatry*. Chicago, IL.
- Parisi, E. A., **Weis, C. N.,** Huggins, A. A., Bennett, K. P., Hajcak, G., Larson, C. L. (2019, May) Amygdala and

hippocampal activation to conditioned stimuli during extinction following threat avoidance. *74th annual meeting of the Society of Biological Psychiatry*. Chicago, IL.

Weis, C. N., Huggins, A. A., Bennett, K. P., Parisi, E. A., Larson, C. L. (2018, November) High resolution resting state functional connectivity in anxiety. *48th Society for Neuroscience Annual Meeting*. San Diego, CA.

Weis, C., Fitzgerald, J., Belleau, E., Pedersen, W., Miskovich, T., Larson, C. (2018, May) Structural and Functional Connectivity of the Posterior Cingulum is related to Re-Experiencing Symptoms in PTSD. *73rd Society of Biological Psychiatry Annual Meeting*. New York, NY.

TECHNICAL SKILLS

- **Programming:** R, shell-scripting (bash, csh), MATLAB, Python, SQL
- **Software:** R-Studio, SPSS, AFNI, FreeSurfer, CONN, Eclipse, RShiny, Github, Webflow, Gephi, MPlus, ArcGIS Pro
- **Statistics:** Univariate and Multivariate analyses, Regression, Dimensionality Reduction, Machine Learning, Graph Theory, Geospatial analysis
- **Brain Imaging:** Acquisition protocol development, preprocessing and analysis of diffusion, structural, and functional MRI data (task and resting state)

PROFESSIONAL LEADERSHIP AND SERVICE

Medical College of Wisconsin

Comprehensive Injury Center | Research Core Co-Chair (2021-present)

Core to establish and set priorities and strategic plans for research across and within CIC divisions

Violence Response-Public Health and Safety Team | Data working group member (2021-present)

Interdisciplinary team coordinating analysis and data management protocols across community and government agencies working to reduce violence across Milwaukee

University of Wisconsin Milwaukee

Neuroimaging Journal Club | Coordinator (2021)

Data Science Club | Member (2020-2021)

Psychology Department Diversity Committee Neuroscience Working Group | Member (2020-2021)

Cognition, Learning, Attention, and Memory Society | Vice President (2017-2020)

Association of Graduate Students in Psychology | Vice President (2017-2020)

TEACHING

Course Director | Public and Community Health PhD Program, Medical College of Wisconsin
Introduction to Statistical Analysis and Stata (Stata I) Fall 2023

Graduate Teaching Assistant | Psychology Department, University of Wisconsin Milwaukee
Research Methods Fall 2017-Spring 2020
Applied Behavior Analysis Fall 2019
Introduction to Psychology Spring 2017

GRADUATE RESEARCH ADVISING AND MENTORSHIP

Dissertation Qualifying Exam and Committee Member

- 2022 Kara Kallies (Medical College of Wisconsin, Public and Community Health)
 2023 Amber Brandolino (Medical College of Wisconsin, Public and Community Health)

Masters Committee Member

- 2022 Kevin Petranu (University of Wisconsin-Milwaukee, Health Psychology)

Medical Student Summer Research Program (MCW)

- 2022 Ally Dove (M1 student)

Summer Program for Undergraduate Research (MCW)

- 2023 Arlena Cross (Undergraduate student at Smith College)

PROFESSIONAL AFFILIATIONS

Cohort 12 - Clinical Research Scholars Program, Medical College of Wisconsin | 2021 - 2023
 American Public Health Association | 2022 - present
 International Society for Traumatic Stress Studies | 2020-present
 Society for Biological Psychiatry | 2018-present
 Organization of Human Brain Mapping | 2019-2022
 Society for Neuroscience | 2016-2019
 American Psychological Association | 2016-2019

AD-HOC REVIEWING

Mental Health Science, *Editorial Board Member*

Biological Psychiatry
 Biological Psychiatry: CNI
 Behavioural Brain Research
 Brain Connectivity
 Communications Medicine
 Developmental Neurobiology
 Developmental Psychobiology

Neuroimage: Clinical
 Molecular Psychiatry
 Translational Psychiatry
 APHA Annual Meeting
 OHBM Annual Meeting
 ISTSS Annual Meeting

REFERENCES

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 Surgery
 Psychiatry and Behavioral Medicine, Institute for
 Health and Equity
 Medical College of Wisconsin
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 Professor & Director,
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