# Megan E. Huibregtse, PhD

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## Education

# 2017–2022 PhD, Human Performance (Minor: Biostatistics)

**Indiana University** 

Department of Kinesiology, School of Public Health

Dissertation title: Effects of subconcussive head impacts in women's water polo on serum levels

of NfL and GFAP and on fMRI activation during working memory tasks

Advisor: Keisuke Kawata. PhD

# 2013–2017 BS, Neuroscience, with distinction (*Minors*: Chemistry, French, and Spanish)

**Indiana University** 

Department of Psychological and Brain Sciences, College of Arts and Sciences

# **Funding**

### Current

# 2023–2025 **Postdoctoral NRSA F32MH134528**

Funding source: National Institutes of Health/National Institute of Mental Health

*Title:* Sex differences in traumatic brain injury: Neural circuit mediators of overlapping stress and physical effects (funded on the 1<sup>st</sup> submission)

Role: PI/Fellow (Sponsor: Jennifer S. Stevens, PhD)

# 2020–2022 TL1 Predoctoral Fellowship

Funding source: Indiana Clinical and Translational Sciences Institute (CTSI)

Title: Subconcussive effects in the female brain: a multimodal study of functional MRI and blood

biomarkers (funded on the 1<sup>st</sup> submission)

NIH Grant #: UL1TR002529 (to Indiana CTSI; Co-PIs: S. Moe and S. Wiehe) Role: PI/Trainee (Mentors: Keisuke Kawata, PhD, and Sharlene Newman, PhD)

### <u>Submitted</u>

# 2025-2030

# K99/R00 Pathway to Independence Award

Funding source: National Institute of Neurological Disorders and Stroke

Title: Neurobiology of trauma-related brain injury: molecular and microstructural signatures at

the intersection of traumatic brain injury and intimate partner violence

Role: PI (K99 Mentors: Jennifer S. Stevens, PhD. and Sarah D. Linnstaedt, PhD)

Submission date: June 12, 2024

Status: Pending review

# Research Experience

# 2022- Postdoctoral Fellow, Emory University School of Medicine

Department of Psychiatry and Behavioral Sciences

PI: Jennifer S. Stevens, PhD

- Supervise data collection for a longitudinal study of changes in threat-related hyperarousal across perimenopause (R01MH128244; Michopoulos & Stevens, MPIs)
- Contribute expertise on glial fibrillary acidic protein and the Quanterix platform for a large secondary data analysis (W81XWH-22-C-0122; McLean, PI)
- Examine sex differences in structural and functional connectivity and assess the moderation of sex on the association between connectivity and symptom burdens in trauma survivors with traumatic brain injury

This work, to date, has resulted in one publication in Menopause, one publication in the Journal of Interpersonal Violence, and two more in preparation. My postdoctoral work is currently funded by F32MH134528 (Huibregtse, PI).

### 2022- Research Associate, Atlanta VA Medical Center

Neuroimaging Core, Center for Visual and Neurocognitive Rehabilitation Supervisor: Jennifer S. Stevens, PhD

- Contribute expertise on screening instruments for lifetime history of traumatic brain injury
- Advise core members on presentation of results and manuscript preparation

This work resulted in a poster presentation award at the 2023 Atlanta VA Research Day, and I won 3<sup>rd</sup> place for the Rehabilitation R&D and Heath Sciences R&D category.

# 2017–2022 Predoctoral Research Assistant, Indiana University School of Public Health

Department of Kinesiology, Clinical Neurotrauma Lab

PI: Keisuke Kawata, PhD

- Led two longitudinal pilot studies of subconcussive head impact exposure in high school football players and trained research personnel to conduct a multisite longitudinal study (R01NS113950; Kawata, PI)
- Performed enzyme-linked immunosorbent assays (ELISAs: S100B, creatine kinase, and several cytokines) and single molecule arrays (Simoa®: neurofilament light, GFAP, UCHL1, tau) in plasma and serum
- Assessed the relationship between acute and chronic subconcussive head impact exposure and changes in blood biomarkers for brain injury
- Designed and led a longitudinal neuroimaging study in collegiate women's water polo players
- Led a groundbreaking pilot study to examine putative neurobiological consequences of frequent exposure to partnered sexual strangulation in young adult women

My predoctoral work resulted in 17 publications with 8 as first/co-first author in journals including Neuroscience & Biobehavioral Reviews, Journal of Neurotrauma, and Journal of Head Trauma Rehabilitation. The last two years were funded by a TL1 Predoctoral Award from the Indiana Clinical and Translational Sciences Institute.

# 2016–2017 Undergraduate Research Assistant, Indiana University

The Gill Center for Biomolecular Science

PI: Andrea G. Hohmann, PhD

- Optimized antibody concentrations and incubation times for Western blots
- Developed morphine withdrawal behavior scoring protocol

This work resulted in one co-authored publication in Molecular Pharmacology.

# Publications (21 total, 10 first/co-first author)

Designation of shared authorship: \* = co-first authorship; # = co-senior authorship

Designation of my mentee co-authors: u = undergraduate mentee; g = graduate mentee

- 21. **Huibregtse ME**, Cooper JJ, & Ross DA (2024). Hieroglyphs and head injuries: sex differences in traumatic brain injury. *Biological Psychiatry*, *95*(12):e25-e27. doi: 10.1016/j.biopsych.2024.04.006
- 20. **Huibregtse ME\***, Wallace S\*, Ravi M, Karra S, McAfee E, Hinojosa CA, Mekawi Y, Powers A, Michopoulos V, & Lathan EC (2024). The relations among childhood maltreatment and later intimate partner violence victimization with and without a weapon in a sample of pregnant Black women. *Journal of Interpersonal Violence*. Online ahead of print.
- Michopoulos V, Huibregtse ME, Chahine EB, Smith AK, Fonkoue IT, Maples-Keller JL, Murphy A, Taylor L<sup>g</sup>, Powers A, & Stevens JS (2023). Association between perimenopausal age and greater PTSD and depression symptoms in trauma-exposed women. *Menopause*, 30(10):1038-1044. https://doi.org/10.1097/gme.000000000002235
- 18. Hou J\*, Huibregtse ME\*, Alexander IL<sup>u</sup>, Klemsz LM<sup>u</sup>, Fu T-C, Rosenberg M, Fortenberry JD, Herbenick D, & Kawata K (2023). Structural brain morphology in young adult women who have been choked/strangled during sex: A whole-brain surface morphometry study. *Brain and Behavior*, 13(8):e3160. https://doi.org/10.1002/brb3.3160

- 17. Hou J, **Huibregtse ME**, Alexander IL<sup>u</sup>, Klemsz LM<sup>u</sup>, Fu T-C, Fortenberry JD, Herbenick D, & Kawata K (2023). Association of Frequent Sexual Choking/Strangulation With Neurophysiological Responses: A Pilot Resting-State fMRI Study. *Journal of Neurotrauma*, 40(13-14):1339-1351. doi:10.1089/neu.2022.0146
- Huibregtse ME, Sweeney SH<sup>u</sup>, Stephens MR<sup>u</sup>, Cheng H, Chen Z, Block HJ, Newman SD, & Kawata K (2023). Association between serum neurofilament light and glial fibrillary acidic protein levels and head impact burden in women's collegiate water polo. *Journal of Neurotrauma*, 40(11-12):1130-1143. https://doi.org/10.1089/neu.2022.0300
- 15. **Huibregtse ME**, Alexander IL<sup>u</sup>, Klemsz LM<sup>u</sup>, Fu TC, Fortenberry JD, Herbenick D, & Kawata K (2022). Frequent and recent non-fatal strangulation/choking during sex and its association with fMRI activation during working memory tasks. *Frontiers in Behavioral Neuroscience*, 16: e881678. DOI: https://doi.org/10.3389/fnbeh.2022.881678
- 14. Zuidema TR<sup>9</sup>, **Huibregtse ME**, & Kawata K (2022). Letter to the Editor: Blood biomarkers may have found a new frontier in spaceflight. *JAMA Neurology*, 79(6): 632. https://doi.org/10.1001/jamaneurol.2022.0670
- 13. **Huibregtse ME**, Bazarian JJ, Shultz SR, & Kawata K (2021). The biological significance and clinical utility of emerging blood biomarkers for brain injury. *Neuroscience & Biobehavioral Reviews*, 130: 433-447. https://doi.org/10.1016/j.neubiorev.2021.08.029
- 12. Kawata K, Steinfeldt JA, **Huibregtse ME**, Nowak MN, Macy JT, Kercher K, Rettke D, Shin A, Chen Z, Ejima K, Kercher K, Newman SD, & Cheng H. (2020) Association between proteomic blood biomarkers and DTI/NODDI metrics in adolescent football players. *Frontiers in Neurology*, 11: e581781. https://doi.org/10.3389/fneur.2020.581781
- 11. **Huibregtse ME**\*, Nowak MN\*, Kalbfell RM<sup>u</sup>, Kim JE, Ejima K, Koppineni A, & Kawata K. (2020) Does acute soccer heading cause an increase in plasma S100B? A randomized controlled trial. *PLOS ONE*, 15(10): e0239507. https://doi.org/10.1371/journal.pone.0239507
- Huibregtse ME, Ejima K, Chen Z, Kalbfell RM<sup>u</sup>, Koppineni A, & Kawata K (2020). Acute time-course changes in CCL11, CCL2, and IL-10 levels after controlled subconcussive head impacts: A pilot randomized clinical trial. *Journal of Head Trauma Rehabilitation*, 35(5): 308-316. https://doi.org/10.1097/HTR.0000000000000597
- 9. Nowak MK, Bevilacqua ZW, Ejima K, **Huibregtse ME**, Chen Z, Mickleborough T, Newman S, & Kawata K. (2020) Neuro-ophthalmologic response to repetitive subconcussive head impacts: a randomized clinical trial. *JAMA Ophthalmology*, 138(4): 350-357. https://doi.org/10.1001/jamaophthalmol.2019.6128
- 8. **Huibregtse ME**, Zonner SW, Ejima K, Bevilacqua ZW, Newman S, Macy JT, & Kawata K (2020). Association Between Muscle Damage and Head Impacts in High School American Football. *International Journal of Sports Medicine*, 41(1): 36-43. https://doi.org/10.1055/a-1021-1735
- 7. Bevilacqua ZW, Kerby ME, Fletcher D, Chen Z, **Huibregtse ME**, & Kawata K. (2019) Preliminary Evidence-Based Recommendations for Return to Learn: a novel pilot study tracking concussed college students. *Concussion*, 4(2): CNC63. https://doi.org/10.2217/cnc-2019-0004
- Zonner SW, Ejima K, Fulgar CC, Charleston CN, Huibregtse ME, Bevilacqua ZW, & Kawata K. (2019). Oculomotor response to cumulative subconcussive head impacts in US high school football players: a pilot longitudinal study. *JAMA Ophthalmology*, 137(3): 265-270. https://doi.org/10.1001/jamaophthalmol.2018.6193
- 5. Zonner SW, Ejima K, Bevilacqua ZW, **Huibregtse ME**, Charleston C, Fulgar CC, & Kawata K. (2019). Association of increased serum S100B levels with high school football subconcussive head impacts. *Frontiers in Neurology*, 10: e327. https://doi.org/10.3389/fneur.2019.00327
- Bevilacqua ZW, Huibregtse ME, & Kawata K (2019). In-vivo protocol of controlled subconcussive head impacts: validation of field study data. *Journal of Visualized Experiments*, (146): e59381. https://doi.org/10.3791/59381

- 3. Wirsching A<sup>9</sup>, Chen Z, **Huibregtse ME**, Bevilacqua ZW, & Kawata K (2018). Acute increase in plasma neurofilament light after repetitive subconcussive head impacts. *Journal of Neurotrauma*, 36(4): 548-553. https://doi.org/10.1089/neu.2018.5836
- 2. **Huibregtse ME** (2018). Improving the translational potential of rodent models to study the behavioral and pathophysiological effects of repetitive mild traumatic brain injury. *Journal of Neurophysiology*, 120(1): 1-3. https://doi.org/10.1152/jn.00898.2017
- Lin X, Dhopeshwarkar AS, Huibregtse ME, Mackie K, & Hohmann AG (2018). Slowly Signaling G Protein-Biased CB2 Cannabinoid Receptor Agonist LY2828360 Suppresses Neuropathic Pain with Sustained Efficacy and Attenuates Morphine Tolerance and Dependence. *Molecular Pharmacology*, 93(2): 49-62. https://doi.org/10.1124/mol.117.109355

### **Preprints**

- 3. Alexander IL<sup>u</sup>, **Huibregtse ME**, Fu T-C, Klemsz LM<sup>u</sup>, Fortenberry JD, Herbenick D, & Kawata K. Chronic elevation of serum S100B but not neurofilament-light due to frequent choking/strangulation during sex in young adult women. medRxiv. 2021 November 2. https://doi.org/10.1101/2021.11.01.21265760
- Kawata K, Steinfeldt JA, Huibregtse ME, Nowak MK, Macy JT, Shin A, Chen Z, Ejima K, Kercher K, Newman SD, & Cheng H. Association between proteomic blood biomarkers and DTI/NODDI metrics in adolescent football players. bioRxiv. 2020 February 24. https://doi.org/10.1101/2020.02.20.958694
- 1. **Huibregtse ME**, Ejima K, Chen Z, Bevilacqua ZW, Koppineni A<sup>u</sup>, Kalbfell RM<sup>u</sup>, & Kawata K. Inflammatory blood biomarker response after controlled subconcussive head impacts: a pilot randomized controlled trial. Research Square. 2019 October 2. https://doi.org/10.21203/rs.2.15214/v1

#### Under review

1. **Huibregtse ME\***, Alexander IL\*<sup>u</sup>, Fu T-C, Klemsz LM<sup>u</sup>, Rosenberg M, Fortenberry JD, Herbenick D, & Kawata K. Association of blood biomarkers for neural injury with recent, frequent exposure to partnered sexual strangulation in young adult women.

## **Presentations**

Primary presenter is <u>underlined</u>. Designation of my mentee co-authors: <sup>u</sup> = undergraduate mentee; <sup>g</sup> = graduate mentee *Oral presentations* 

- 6. <u>Huibregtse ME</u>. "Association between GFAP levels and white matter integrity in trauma survivors." Oral presentation for the DISENTANGLE Neuroimaging Group monthly meeting on June 3, 2024.
- 5. <u>Huibregtse ME.</u> "Sex-stratified association between elevated GFAP and white matter disruption in trauma survivors." Ten-minute data blitz presentation during the Grady Trauma Project weekly team meeting on March 19, 2024.
- 4. <u>Huibregtse ME</u>. "Neurologic effects of partnered sexual choking/strangulation: a pilot study." Ten-minute data blitz presentations during Grady Trauma Project weekly team meetings on January 16, 2024 (part 1) and January 30, 2024 (part 2).
- 3. <u>Huibregtse ME</u>. "Functional outcomes in trauma survivors with suspected mild traumatic brain injury in the AURORA study." Ten-minute data blitz presentation during the Grady Trauma Project weekly team meeting on September 19, 2023.
- 2. <u>Huibregtse ME</u>. "Let's talk about sex in traumatic brain injury research." National Neuroscience Curriculum Initiative: "This 'Stuff' Is Really Cool" (TSIRC). Selected as a fan favorite presentation at the pre-conference NNCI BRAIN meeting; presented a second time during the 2023 SOBP Annual Meeting. April 27, 2023. San Diego, CA.
- 1. <u>Huibregtse ME</u>, Harnett NG, Ressler KJ, McLean SA, Koenen KC, Kessler RC, & Stevens JS. "Modeling posttrauma symptoms and health-related quality of life: interaction of sex and traumatic brain injury." Oral presentation at the Emory 3rd Annual SABV Workshop. December 7, 2022. Atlanta, GA.

#### Poster presentations

- 22. McLean SA, Bucher MA, **Huibregtse M**, Stritzel H, Ji Y, Yao X, & An X. "Traditional Clinical Criteria Do Not Accurately Predict Biomarker-Positive Traumatic Brain Injury: Results From a Large-Scale Prospective Cohort Study." Poster abstract accepted for presentation at the 2024 Military Health System Research Symposium, Kissimmee, FL.
- 21. <u>Huibregtse ME</u>, Li T, Harnett NG, Jovanovic T, Koenen KC, Kessler RC, Ressler KJ, McLean SA, & Stevens JS. "Sex-Stratified Analysis of the Association Between Elevated GFAP Levels and Quantitative Anisotropy in Trauma Survivors." Poster accepted for presentation at the 41<sup>st</sup> Annual Symposium of the National Neurotrauma Society, including the AANS/CNS Joint Section on Neurotrauma and Critical Care. June 9–12, 2024. San Francisco, CA.
- 20. <u>Hassan DS<sup>u</sup></u>, **Huibregtse ME**, Taylor L, Murphy A, Arnold AR, Lee L<sup>u</sup>, Jung E, Chahine EB, Powers A, Smith AK, Stevens JS, & Michopoulos V. "The Association between Menopause and Psychiatric Symptoms in Perimenopausal Black Women." Poster presented at the Anxiety and Depression Association of America annual meeting. April 11–14, 2024. Boston, MA.
- 19. <u>Davis M</u>, DelRosario D, Hinojosa CA, **Huibregtse ME**, Krawczuk B, Johnson CB, Michopoulos V, Powers-Lott A, & Stevens JS. "Using Ecological Momentary Assessment to Examine the Effect of Negative Affect on Posttraumatic Stress Disorder Symptoms Across the Menstrual Cycle in Black American Women." Poster presented at the Anxiety and Depression Association of America annual meeting. April 11–14, 2024. Boston, MA.
- DelRosario D, Davis M, Hinojosa CA, Huibregtse ME, Krawczuk B, Johnson CB, Michopoulos V, Powers A, & Stevens JS. "Alcohol Craving Across the Menstrual Cycle in Black American Women." Poster presented at the Anxiety and Depression Association of America annual meeting. April 11–14, 2024. Boston, MA.
- 17. <u>Huibregtse ME</u>, Harnett NG, Ressler KJ, McLean SA, Koenen KC, Kessler RC, & Stevens JS. "Associations between symptom profiles, structural and functional neural circuitry, and quality of life among a large cohort of trauma survivors." Poster presented at the 2023 American College of Neuropsychopharmocology Annual Meeting. December 3–6, 2023. Tampa, FL.
- 16. <u>Huibregtse ME</u>, Harnett NG, Ressler KJ, McLean SA, Koenen KC, Kessler RC, & Stevens JS. "Early predictors of chronic functional outcomes in trauma-exposed individuals who met ACRM criteria for mild traumatic brain injury in the AURORA study." Poster accepted for presentation at the 40th Annual Symposium of the National Neurotrauma Society including the AANS/CNS Joint Section on Neurotrauma and Critical Care (Neurotrauma 2023). June 25–28, 2023. Austin, TX. *Note: unable to attend due to COVID-19 infection.*
- 15. <u>Huibregtse ME</u>, Harnett NG, Ressler KJ, McLean SA, Koenen KC, Kessler RC, & Stevens JS. "Early predictors of chronic functional outcomes in trauma-exposed individuals who met ACRM criteria for mild traumatic brain injury in the AURORA study." Poster presented at the 2023 Atlanta VA Research Day. May 18, 2023. Atlanta, GA.
  - Awarded 3rd place in the RR&D/HSR&D poster competition.
- 14. <u>Huibregtse ME</u>, Harnett NG, Ressler KJ, McLean SA, Koenen KC, Kessler RC, & Stevens JS. "Modeling post-trauma symptoms over time: interaction of sex and traumatic brain injury." Poster presented at the 2023 SOBP Annual Meeting. April 26–30, 2023. San Diego, CA.
- 13. <u>Huibregtse ME</u>, Alexander IL<sup>u</sup>, Hou J, Fu T-C, Fortenberry JD, Herbenick D, & Kawata K. "Differences in brain health are noted between individuals who are choked during sex by partners and individuals who do not participate in this sex behavior." Poster presented at #ITalkSexualHealth Conference. October 12–14, 2022. Kennesaw, GA.
- 12. <u>Alexander I<sup>u</sup></u>, **Huibregtse M**, Fu T-C, Klemsz L<sup>u</sup>, Fortenberry D, Herbenick D, & Kawata K. Chronic Elevation of Serum S100b but Not Neurofilament-Light Due to Frequent Choking/Strangulation During Sex in Young Adult Women. Poster presented at 39th Annual Symposium Of The National Neurotrauma Society (Neurotrauma 2022). June 26–29, 2022. Atlanta, GA.

- 11. <u>Huibregtse ME</u>, Rettke DJ, Nowak MK, Chapman RF, & Kawata K. "Neurocognitive and neuro-ophthalmologic functions are resilient to the combined stressors of acute hypoxia and soccer heading: a pilot randomized crossover study." Poster presented at Neurotrauma 2021. July 11–14, 2021. Virtual conference due to COVID-19 pandemic.
- 10. <u>Huibregtse ME</u>, Macy JT, Steinfeldt JA, & Kawata K. "The Effect of Head Impact Exposure on Changes in Neurocognitive and Oculomotor Function Across a High School American Football Season: A Pilot Study." Poster presented at Translational Science 2021. March 30–April 2, 2021. Virtual conference due to COVID-19 pandemic.
- 9. <u>Huibregtse ME</u>, Nowak MK, Steinfeldt JA, Macy JT, Newman SD, Cheng H, & Kawata K. "Association between proteomic blood biomarkers and DTI/NODDI metrics in adolescent football players." Poster presented at the 3rd Annual IU School of Public Health Research Day. April 29, 2020. Bloomington, IN. Virtual event due to COVID-19 pandemic.
- 8. <u>Huibregtse ME</u>, Zonner SW, Ejima K, Bevilacqua ZW, Newman SD, Macy JT, & Kawata K. "Association of physiological variables with subconcussive head impacts in high school football." Poster presented at the 2019 AAN Sports Concussion Conference. July 27–28, 2019. Indianapolis, IN.
- 7. <u>Kawata K</u>, Nowak M, Bevilacqua Z, Ejima K, **Huibregtse M**, Mickleborough T, & Newman S. "Transient perturbation in neuro-ophthalmologic function after repetitive subconcussive head impacts: a randomized controlled trial." Poster presented at the 2019 AAN Sports Concussion Conference. July 27–28, 2019. Indianapolis, IN.
- Bevilacqua Z, Kerby M, Fletcher D, Chen Z, Merritt B, Huibregtse M, & Kawata K. "Preliminary Evidence-Based Recommendations for Return to Learn: a novel pilot study tracking concussion recovery in college students." Poster presented at the 2019 AAN Sports Concussion Conference. July 27–28, 2019. Indianapolis, IN.
- 5. <u>Huibregtse ME</u>, Zonner SW, Ejima K, Bevilacqua ZW, Newman SD, Macy JT, & Kawata K. "Association of physiological variables with subconcussive head impacts in high school football." Poster presented at the 37th Annual National Neurotrauma Symposium. June 29–July 3, 2019. Pittsburgh, PA.
- 4. <u>Huibregtse ME</u>, Zonner SW, Ejima K, Bevilacqua ZW, Newman S, Macy J, & Kawata K. "Association of acute muscle damage and head impact kinematics in high school American football players." Poster presented at the 2nd Annual IU School of Public Health Research Day. April 26, 2019. Bloomington, IN.
- 3. <u>Huibregtse ME</u>, Chen Z, Bevilacqua ZW, Mickleborough TD, & Kawata K. "Association of Plasma CCL11 Increase from Subconcussive Head Impacts with Duration of Soccer Heading Experience." Poster presented at the 2018 Military Health System Research Symposium. August 14–17, 2018. Kissimmee, FL.
- 2. <u>Huibregtse ME</u>, Chen Z, Bevilacqua ZW, Mickleborough TD, & Kawata K (2018). "Association of Plasma CCL11 Increase from Subconcussive Head Impacts with Duration of Soccer Heading Experience." Poster presented at the 2018 Indiana Traumatic Spinal Cord and Brain Injury Research Conference, IU Health Neuroscience Center. April 18, 2018. Indianapolis, IN.
- 1. <u>Lin X</u>, Lee WH, **Huibregtse ME**, Slivicki RA, Mackie K, & Hohmann AG (2016). "Cannabinoid Type 2 Receptor Agonist LY2828360 Attenuates Morphine Tolerance in a Mouse Model of Chemotherapy-induced Neuropathic Pain." Poster presented at the 2016 Gill Symposium. September 12, 2016. Bloomington, IN.

# Honors, Awards, and Scholarships

### Society awards

2023 Society of Biological Psychiatry Travel Fellowship Award

2021 American Kinesiology Association Doctoral Scholar Award, honorable mention

# Indiana University awards

2019–2020 Hinton, Stager, & Tanner Women's Health Research Fellowship

IU School of Public Health merit-based award for graduate students conducting research pertaining to women's health; \$1,500

Megan E. Huibregtse, PhD Curriculum Vi	
2018–2020	Marian Godeke Miller Fellowship IU School of Public Health merit-based award for doctoral students; \$750/year for two years
2018–2020	Dr. Anita Aldrich Research Fellowship Award IU School of Public Health: merit-based award for graduate students studying in public health settings, preference given to women as Dr. Anita Aldrich was the first woman to serve in numerous roles at IU; \$1,000/year for two years
2018–2019	Gallahue-Morris Graduate Research Fellowship IU School of Public Health merit-based award for Human Performance doctoral students; \$750
2015–2016	Nancy Blough Blackwell Scholarship IU Student Foundation: merit-based award given to one female Little 500 rider per year for academic excellence, performance and attitude during the race, and involvement on campus; \$500
2014–2016	Colloquium for Women of Indiana University Scholarship  IU Student Foundation: merit-based award for academic excellence, preference given to female  Little 500 riders; \$1,500/year for two years
2014–2017	Arts & Sciences Indiana Scholars Scholarship Competitive award for academic excellence for students majoring in the College of Arts and Sciences; \$1,000/ year for three years
2013–2017	Indiana University Excellence Scholar Competitive award for Indiana residents attending IU with exceptional SAT score and GPA; \$9,000/year for four years
2013–2017	Indiana University Hutton Honors College Scholar Competitive award for direct admits to the IU Hutton Honors College; \$2,000/year for four years
2013–2014	First Year Indiana Scholars Award

# Certificates, Courses, and Workshops

# Jul/Aug 2024 NeuroHackademy (9am-5pm M-F for two weeks)

University of Washington eScience Institute

- Accepted to attend the 2024 NeuroHackademy short course
- Will learn about tools and techniques to analyze neuroimaging data in a rigorous and reproducible way

Competitive award for first-year Indiana resident students for academic performance; \$1,000

The first week will include lectures and open Q&A sessions; the second week will be devoted to hands-on breakout and collaborative sessions

# Sept 2023 ISMRM WHATEVER Workshop (10 contact hours)

International Society for Magnetic Resonance in Medicine (ISMRM) Hosted by Vanderbilt University

- Workshop on WHite Matter Analysis, Translation, Experimental Validation, Evaluation & Reproducibility
- Covered macroscopy, magnetization transfer, relaxation, diffusion, susceptibility, and fast multicontrast methods

# Aug 2023 Entering Mentoring Certificate Program (15 contact hours)

Emory School Of Medicine, Office of Postdoctoral Education

 Competencies covered: effective communication, aligning expectations, assessing understanding, addressing equity and inclusion, fostering independence, promoting professional development, fostering well-being, cultivating ethical behavior, promoting research self-efficacy, and articulating my mentoring philosophy

## Spring 2023 Effective Scientific Communication course (10 contact hours)

National Neuroscience Curriculum Initiative (NNCI)

- Virtual weekly course on adult learning, principles of effective communication, and narrative development
- In-person presentation at SOBP 2023
- After course completion, I was invited to write Clinical Commentary with the NNCI Executive Director and the Co-Chair for submission to Biological Psychiatry

### Oct/Nov 2022 Emory SOM Responsible Conduct of Research Certificate (8 contact hours)

 Competencies covered: responsible data acquisition, analysis, authorship, and publication; research misconduct; peer review; team science; safe and inclusive research environments; mentoring; human subjects and animal research policies and laboratory practices; conflicts of interest

# **Professional Development**

2023	Head Start Faculty Job Search Summer Series (9 contact hours) Emory University School of Medicine Office of Postdoctoral Education
Oct 2022	NIH K Tutorial (6 contact hours) Emory University School of Medicine Office of Postdoctoral Education
Apr 2022	Team Science all-day workshop (8 contact hours) Indiana Clinical and Translational Sciences Institute
Apr 2022	Mock NIH Study Section - K Awards (2 contact hours) Translational Science 2022
Mar 2021	Mock NIH Study Section - K Awards (2 contact hours) Translational Science 2021

# Mentoring Experience

# Current mentees

2024– Angela Li

Undergraduate student at Oxford College of Emory University; GTP Intern Meet with Angela weekly to advise her on her independent research project and prepare a poster presentation.

# 2023- **Donia Hassan**

Undergraduate student at Emory University; GTP Intern

Meet with Donia weekly to supervise her literature review, her research proposals, and data analysis; I am advising her on a conference abstract submission and poster presentation, and best practices for blood sample processing.

# Previous mentees

2023 Leigha Lee

Undergraduate student at Georgia State University; GTP Intern

Current position: incoming M1 at Emory University School of Medicine

Taught Leigha how to assess weekly survey compliance for R01MH128244 (Michopoulos & Stevens, MPIs); provide support and guidance for her enrollment calls.

## 2023 **Danielle Mather**

Undergraduate exchange student at Emory University; GTP Intern

Current position: undergraduate student at the University of St. Andrews (Scotland)

Met weekly to advise Danielle on her undergraduate research experience poster presentation, which she presented at the Neuroscience and Behavioral Biology Undergraduate Research Symposium in April 2023.

#### 2021–2022 Lillian Klemsz

Undergraduate student at Indiana University

Current position: Medical student at Indiana University School of Medicine

Taught Lillian how to conduct informed consent visits and screen potential participants; co-

authored three publications; taught her how to run neuroimaging study visits.

# 2021–2022 **Sage Sweeney**

Undergraduate student at Indiana University

Current position: Lab manager, Clinical Neurotrauma Lab (PI: Kawata)

Taught Sage how to interact with study participants and stakeholders and how to deploy and troubleshoot the impact monitoring mouthguards; co-authored one publication to date; taught her how to run neuroimaging study visits.

# 2021–2022 Mikayla Stephens

Undergraduate student at Indiana University

Current position: Medical student at Marian University College of Osteopathic Medicine Taught Mikayla how to interact with study participants and stakeholders and how to deploy and troubleshoot the impact monitoring mouthguards; co-authored one publication to date; taught her how to run neuroimaging study visits.

#### 2020–2022 Isabella Alexander

Undergraduate student at Indiana University

Current position: Medical student at University of Texas Southwestern Medical School Taught Isabella how to run biomarker assays and run neuroimaging study visits; co-authored three publications with her; advised her on her honor's thesis.

### **2020–2022 Edson Cuiriz, ATC**

Post-professional athletic training master's program student at Indiana University Current position: Athletic Trainer, College of the Holy Cross

Advised Edson on his master's research project; gave feedback on his proposal documents and presentation.

### 2019–2021 Jessica Carr, LAT, ATC

Post-professional athletic training master's program student at Indiana University

Current position: Athletic Trainer, Indiana University Athletics

Advised Jessica and her research partner (Casey) on their master's research project; gave feedback on their proposal documents and presentation.

### 2019–2021 Casey Scheuer, ATC

Post-professional athletic training master's program student at Indiana University Current position: Assistant Athletic Trainer, University of California San Diego Advised Casey and her research partner (Jessica) on their master's research project; gave feedback on their proposal documents and presentation.

### 2018–2021 Rachel Kalbfell

Undergraduate student at Indiana University

Current position: Medical student at Washington University School of Medicine in St. Louis Worked with Rachel on a soccer heading model study; co-authored two publications.

### **Invited Talks**

3/19/2024 "Sex-stratified association between elevated GFAP and white matter disruption in trauma

survivors" [1-hour talk]

Joint Albers-Bangasser Lab Meeting

Georgia State University Neuroscience Institute

Joint lab meeting of the Albers and Bangasser labs at Georgia State University; approximately 10 trainees and 2 faculty members

1/4/2019 "Clinical Neurotrauma Lab: Methods and Results" [1-hour talk]

Department of Epidemiology and Biostatistics Weekly Seminar Series

Indiana University School of Public Health

Megan E. Huibregtse, PhD Curriculum Vitae

Approximately 25 faculty and graduate students

2/20/2018 "Concussion and subconcussive head impact research at Indiana University" [1-hour talk]

Little 500 Student Coaching Clinic Indiana University Student Foundation Approximately 50 undergraduate students

# Teaching Experience

# Formal Courses

2017–2020 **Structural Kinesiology - Lab** (six semesters)

Department of Kinesiology

Indiana University School of Public Health

- 5–15 undergraduate students per section; taught 3–4 sections per semester
- Wrote practical exams and weekly lab worksheets
- Met with students outside of class one-on-one to discuss grades and studying strategies Graded worksheets, quizzes, and exams

### **Guest Lectures**

Mar 2023 "Considering sex and gender in neurotrauma"

Course: Advanced Topics in Athletic Training Research

Indiana University School of Public Health

Eight master's students; required course for students in the post-professional athletic training program

Apr 2022 "Considering sex and gender in neurotrauma"

Course: Topics in Exercise Science - Neurotrauma

Rochester Institute of Technology

Approximately 15 students; elective course for exercise science undergraduates

Apr 2022 "Considering sex and gender in neurotrauma"

Course: Advanced Topics in Athletic Training Research

Indiana University School of Public Health

Eight master's students; required course for students in the post-professional athletic training program

Apr 2021 "Sex-related response to brain trauma"

Course: Advanced Topics in Athletic Training Research

Indiana University School of Public Health

Eight master's students; required course for students in the post-professional athletic training program

Mar 2020 "Traumatic brain injuries: sex differences and the female-specific response"

Course: Advanced Topics in Athletic Training Research

Indiana University School of Public Health

Eight master's students; required course for students in the post-professional athletic training program

Oct 2019 "Motor Development" & "Subconcussive head impact research"

Course: Biology of Behavior

Indiana University School of Education

Required course for master's and doctoral students in the Mental Health Counseling and Counselor Education and Learning and Developmental Science programs; approximately 30 graduate students

# Service

Professional service

Megan E. Huibregtse, PhD Curriculum Vitae

## 2023- National Neurotrauma Society TEAM Committee member

 TEAM virtual roundtable subcommittee: propose topics and panelists and assist with event coordination

# 2021–2023 Graduate Women in Science Fellowships Committee member

- Identify and communicate with reviewers for 5-6 fellowship applications per year

# Conference organization

1. Symposium: Sex Differences in the Effects of Subconcussive Head Impact and Repetitive Mild Blast Exposure: Across the Translational Science Spectrum. 2024 National Neurotrauma Society Annual Symposium. June 10, 2024. San Francisco, CA. Role: Symposium organizer and chair.

### Contributing reviewer for peer-reviewed journals

Biological Psychiatry: CNNI Signals

Brain Sciences

Frontiers in Behavioral Neuroscience

Cerebral Cortex

European Journal of Neurology

Scientific Reports

Neuroscience Letters

Brain Imaging and Behavior

Journal of Neuro-ophthalmology

Neurology Sports Medicine

### Memberships

2020– National Neurotrauma Society

2020–2022 Association for Clinical and Translational Science

2019–2023 Graduate Women in Science

### University academic service

2019–2021 Indiana University School of Public Health Student Government

2020–2021: Graduate Studies Committee Co-Representative 2019–2020: Department of Kinesiology Representative

Jan 2020 Indiana University School of Public Health Student Grievance Committee

### Community service

2021 Indiana University Student Foundation Little 500 race day official

- Assess team conduct and strategy for compliance and safety
- Liaise between chief steward and Little 500 teams and coaches to communicate rule infractions

### 2020– Little 500 Alumni Coach for SKI Cycling

- Mentor undergraduate women in goal setting, decision making, personal growth, and cultivating a positive team dynamic
- Motivate each year's team to achieve their personal and collective goals
- Oversee training with my co-coach and former teammate

#### 2018- Indiana University Student Foundation Appeals Board member

- Serve as an alumni member of the Appeals Board
- Consider and vote on individual cases where Little 500 riders are in violation of eligibility rules (e.g., changing team affiliations, minimum GPA and credit hour requirements) and have submitted requests for exceptions