

Curriculum Vitae
Kevin A. Johnson, PhD RN
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General Information

University address: FSU Neuromodulation
Behavioral Sciences and Social Medicine
College of Medicine
2000 Levy Avenue, A0339
Florida State University
Tallahassee, FL 32333
Phone: (850) 644-2824

E-mail address: kjohnson21@fsu.edu
kevin.a.johnson@med.fsu.edu

Professional Preparation

- 2008 B.S.N., Medical University of South Carolina, Charleston, SC. Major:
Nursing.
- 2007 Ph.D., Medical University of South Carolina, Charleston, SC. Major:
Physiology. Neuroscience. Supervisor: Mark S. George, M.D.
- Unspecified Name. (2007). *Classical Conditioning Using Transcranial
Magnetic Stimulation as the Unconditioned Stimulus*. Unpublished
doctoral dissertation, Medical University of South Carolina,
Charleston, SC.
- 2002 B.E., Vanderbilt University, Nashville, TN. Major: Biomedical Engineering,
Psychology.

Nondegree Education and Training

- 2009–2011 Postdoctoral Research Fellow in Anesthesia, Stanford University, Palo Alto,
CA.

Professional Credential(s)

- 2020–present Registered Nurse, License Number RN9547490, State of Florida, Board of Nursing (Compact Status: Multistate).
- 2016–present Registered Nurse, License Number RN678815, State of Pennsylvania, Board of Nursing.
- 2010–2023 Registered Nurse, License Number 768487, State of California, Board of Registered Nursing.
- 2009–2010 Registered Nurse, License Number 205395, State of South Carolina, Board of Nursing.

Professional Experience

- 2020–present Research Faculty II, Behavioral Sciences and Social Medicine, Florida State University. With Dr. F. Andrew Kozel, Dr. Johnson is the co-founder and Co-Director of FSU Neuromodulation (FSUN). FSUN improves the lives of patients by advancing neuromodulation therapies for those who struggle with psychiatric disorders and pain. To address these symptoms of dysphoria from depression, bipolar, anxiety, PTSD or pain, FSUN accelerates the impact of neuromodulation technologies through research, clinical, educational and community outreach activities.
- 2018–2020 Neuroscientist (Director Level), Product Development Group, Neuronetics, Malvern, PA. Subject matter expert for new product development, expansion of clinical indications, external partnerships, and various activities across the organization.
- 2015–2018 R&D Research Manager, Pain Franchise, OTC Global Innovation, Johnson & Johnson, Fort Washington, PA. Front end innovation for pain OTC and adjacent categories. Performed external landscapes and evaluations. Worked with internal and external partners to de-risk and advance products.
- 2014–2015 Senior Research Scientist, Stanford Systems Neuroscience & Pain Laboratory, Stanford University, Palo Alto, CA.
- 2011–2014 Research Associate, Stanford Systems Neuroscience & Pain Laboratory, Stanford University, Palo Alto, CA.
- 2009–2011 Postdoctoral Scholar, Stanford Systems Neuroscience & Pain Laboratory, Stanford University, Palo Alto, CA.

2007–2009 Postdoctoral Scholar, Brain Stimulation Laboratory; Center for Advanced Imaging Research, Medical University of South Carolina, Charleston, SC.

2001–2002 Research Assistant, Vanderbilt Affective Neuroimaging Laboratory, Vanderbilt University, Nashville, TN.

Areas of Expertise

Clinical Research.

Medical Device Development.

Mental Health.

Neuroimaging (fMRI, fNIRS).

Neuromodulation (TMS, Consumer Devices, Sensory Devices).

Sensory and Pain Neuroscience.

Current Membership in Professional Organizations

Clinical TMS Society

North American Neuromodulation Society / International Neuromodulation Society

Teaching

Supervision of Student Research Not Related to Thesis or Dissertation

Bodre, E. (Sep 2024–present).

College of Medicine, Master's Bridge Program. Research Project "Preferences for Behavior Coaching for Chronic Pain".

Nesmith, N. (Dec 2023–present).

College of Medicine, Master's Bridge Program. Research Project "Characterizing the Scalp Tolerability of TMS".

Bodycot, V. (Jan–Feb 2023).

Laboratory Rotation.

Guest Presentation

Johnson, K. A. (2022–2024). *FSU Neuromodulation for "Enough To Be Dangerous" Course (Annual)*. FSU Jim Moran College of Entrepreneurship.

Research and Original Creative Work

Publications

Refereed Journal Articles

Siddiqi, S. H., Philip, N. S., Palm, S. T., Carreon, D. M., Arulpragasam, A. R., Barredo, J., Bouchard, H., Ferguson, M. A., Grafman, J. H., Morey, R. A., & Fox, M. D. (2024). A potential target for noninvasive neuromodulation of PTSD symptoms derived from focal brain lesions in veterans. *Nature Neuroscience*, *27*, 2231-2239. doi:10.1038/s41593-024-01772-7

We also acknowledge discussions to conceptualize this project in collaboration with K. Johnson, G. Harper and C. Anderson of Neuronetics Inc., which led to an investigator-initiated grant for the present work.

Spitz, A. M., Senda, M. C., Johnson, K. A., Taylor, I. M., Jensen Mariah M, & Kozel, F. A. (2024). The Relationship of Anxious Arousal with Treatment of Dysphoria Using VR Mindfulness and Two Accelerated TMS Protocols. *The Journal of Clinical Psychiatry*, *85*(2).

Senda, M. C., Johnson, K. A., Taylor, I. M., Jensen, M. M., Flynn, H., & Kozel, F. A. (2023). Accelerated Transcranial Magnetic Stimulation Provided Rapid Improvement in Depressive, Anxiety, Trauma, and Pain Symptoms in a Woman Suffering from Postpartum Depression. *The Journal of ECT*, *39*(3), e14-e15. doi:10.1097/YCT.0000000000000936

Senda, M. C., Johnson, K. A., Taylor, I. M., Jensen Mariah M, Hou Yang, & Kozel, F. A. (2023). Stepwise Implementation of Virtual Reality Mindfulness and Accelerated Transcranial Magnetic Stimulation Treatments for Dysphoria in Neuropsychiatric Disorders. *Depression and Anxiety*, *16*. doi:10.1155/2023/9025984

Siddiqi, S. H., Schaper, F. L. W. V. J., Horn, A., Hsu, J., Padmanabhan, J. L., Brodtmann, A., Cash, R. F. H., Corbetta, M., Choi, K. S., Dougherty, D. D., Egorova, N., Fitzgerald, P. B., George, M. S., Gozzi, S. A., Irmen, F., Kuhn, A. A., Johnson, K. A., Naidech, A. M., Pascual-Leone, A., et al. (2021). Brain stimulation and brain lesions converge on common causal circuits in neuropsychiatric disease. *Nature human behaviour*. Retrieved from <https://europepmc.org/articles/PMC8688172> doi:10.1038/s41562-021-01161-1

Webler, R. D., Hamady, C., Molnar, C., Johnson, K., Bonilha, L., Anderson, B. S., Bruin, C., Bohning, D. E., George, M. S., & Nahas, Z. (2020). Decreased interhemispheric connectivity and increased cortical excitability in unmedicated schizophrenia: A prefrontal interleaved TMS fMRI study. *Brain Stimulation*, *13*(5), 1467-1475. Retrieved from [Go to ISI>://WOS:000573960600008 doi:10.1016/j.brs.2020.06.017

George, Mark/0000-0003-1767-1815; Webler, Ryan/0000-0002-3861-3393.

Nickel, J. C., Stephens-Shields, A. J., Landis, J. R., Mullins, C., van Bokhoven, A., Lucia, M. S., Henderson, J. P., Sen, B., Krol, J. E., Ehrlich, G. D., Clemens, J. Q., Hanno, P., Kirkali, Z., Kusek, J. W., Pontari, M. A., Klumpp, D. J., Schaeffer, A. J., Apkarian, A., Cella, D., Farmer, M. A., Fitzgerald, C., Gershon, R., Griffith, J. W., Heckman, Charles J., II, Jiang, M., Keefer, L., Marko, D. S., Michniewicz, J., Parrish, T., Tu, F., Mayer, E. A., Rodriguez, L. V., Alger, J., Ashe-McNalley, C. P., Ellingson, B., Heendeniya, N., Kilpatrick, L., Kutch, J., Labus, J. S., Naliboff, B. D., Randal, F., Smith, S. R., Kreder, K. J., Bradley, C. S., Eno, M., & Greiner, K. (2019). A Culture-Independent Analysis of the Microbiota of Female Interstitial Cystitis/Bladder Pain Syndrome Participants in the MAPP Research Network. *Journal of Clinical Medicine*, 8(3). Retrieved from [Go to ISI>://WOS:000464435800001 doi:10.3390/jcm8030415

Mackey, Sean/AAF-3314-2019; Kirkali, Ziya/AAC-1629-2021; Colditz, Graham A/A-3963-2009; Labus, Jennifer S/M-4567-2017 ditz, Graham A/0000-0002-7307-0291; Labus, Jennifer S/0000-0002-6634-2551; Landis, J Richard/0000-0001-8099-0988.

Gaertner, M., Kong, Jiang-Ti, Scherrer, K. H., Foote, A., Mackey, S., & Johnson, K. A. (2018). Advancing Transcranial Magnetic Stimulation Methods for Complex Regional Pain Syndrome: An Open-Label Study of Paired Theta Burst and High-Frequency Stimulation. *Neuromodulation*, 21(4), 409-416. Retrieved from [Go to ISI>://WOS:000437692500012 doi:10.1111/ner.12760

Mackey, Sean/AAF-3314-2019 key, Sean/0000-0001-7744-5348.

Sturgeon, J. A., Hah, J. M., Sharifzadeh, Y., Middleton, S. K., Rico, T., Johnson, K. A., & Mackey, S. C. (2018). Predictors of Daily Pain Medication Use in Individuals with Recurrent Back Pain. *International Journal of Behavioral Medicine*, 25(2), 252-258. Retrieved from [Go to ISI>://WOS:000427632300012 doi:10.1007/s12529-017-9686-8

Mackey, Sean/AAF-3314-2019 rgeon, John/0000-0001-6388-0920; Mackey, Sean/0000-0001-7744-5348.

Mackey, I. G., Dixon, E. A., Johnson, K. A., & Kong, Jiang-Ti. (2017). Dynamic Quantitative Sensory Testing to Characterize Central Pain Processing. *Journal of Visualized Experiments*. doi:10.3791/54452

Taub, C. J., Sturgeon, J. A., Johnson, K. A., Mackey, S. C., & Darnall, B. D. (2017). Effects of a Pain Catastrophizing Induction on Sensory Testing in Women with Chronic Low Back Pain: A Pilot Study. *Pain Research & Management*, 2017. Retrieved from [Go to ISI>://WOS:000395018300001 doi:10.1155/2017/7892494

Mackey, Sean/AAF-3314-2019 rgeon, John/0000-0001-6388-0920; Mackey, Sean/0000-0001-7744-5348; Darnall, Beth D./0000-0003-3590-511X.

Scherrer, K., Johnson, K., Kong, J., Nilakantan, A., Middleton, S., Foote, A., & Mackey, S. (2017). Effects of long-term opioid use in chronic low back pain patients: results from quantitative sensory testing and behavioral measures. *Journal of Pain*, 18(4), S30-S30. Retrieved from [Go to ISI>://WOS:000398755400124 doi:10.1016/j.jpain.2017.02.382

Mackey, Sean/AAF-3314-2019.

Weber, K., Sentis, A., Johnson, K., Martucci, K., & Mackey, S. (2017). Neural correlates of response inhibition in chronic low back pain: a functional magnetic resonance imaging study. *Journal of Pain, 18*(4), S57-S57. Retrieved from [Go to ISI>://WOS:000398755400233 doi:10.1016/j.jpain.2017.02.221

Mackey, Sean/AAF-3314-2019.

Tran, P., Sturgeon, J. A., Nilakantan, A., Foote, A., Mackey, S., & Johnson, K. (2017). Pain Catastrophizing Mediates the Relationship Between Trait Happiness and Depressive Symptoms in Individuals with Current Pain. *Journal of Applied Biobehavioral Research, 22*(4). Retrieved from [Go to ISI>://WOS:000417184500002 doi:10.1111/jabr.12069

Mackey, Sean/AAF-3314-2019 akantan, Aneasha/0000-0002-9413-3183; Mackey, Sean/0000-0001-7744-5348; Tran, Patrick/0000-0002-7417-085X; Sturgeon, John/0000-0001-6388-0920.

Sentis, A., Weber, K., Johnson, K., & Mackey, S. (2017). Pain processing during recalled pain differs in chronic low back pain sufferers and healthy individuals. *Journal of Pain, 18*(4), S57-S57. Retrieved from [Go to ISI>://WOS:000398755400234 doi:10.1016/j.jpain.2017.02.222

Mackey, Sean/AAF-3314-2019.

Middleton, S., Sturgeon, J., Rico, T., Mackey, S., & Johnson, K. (2016). Depression mediates the relationship between pain intensity and effort in minor, but not major, decision making. *Journal of Pain, 17*(4), S20-S20. Retrieved from [Go to ISI>://WOS:000373523000081 doi:10.1016/j.jpain.2016.01.082

Mackey, Sean/AAF-3314-2019.

Dixon, E. A., Benham, G., Sturgeon, J. A., Mackey, S., Johnson, K. A., & Younger, J. (2016). Development of the Sensory Hypersensitivity Scale (SHS): a self-report tool for assessing sensitivity to sensory stimuli. *Journal of Behavioral Medicine, 39*(3), 537-550. Retrieved from [Go to ISI>://WOS:000375570700017 doi:10.1007/s10865-016-9720-3

Benham, Grant/N-9675-2019; Mackey, Sean/AAF-3314-2019; Benham, Grant/H-3447-2017 ham, Grant/0000-0002-5664-6025; Benham, Grant/0000-0002-5664-6025; Mackey, Sean/0000-0001-7744-5348; Sturgeon, John/0000-0001-6388-0920; Dixon, Eric/0000-0002-4645-7845.

Sturgeon, J., Middleton, S., Rico, T., Mackey, S., & Johnson, K. (2016). Differential daily effects of pain intensity, sleep, and mood on physical activity in chronic back pain. *Journal of Pain, 17*(4), S16-S16. Retrieved from [Go to ISI>://WOS:000373523000063

Mackey, Sean/AAF-3314-2019.

Taub, C., Darnall, B., Johnson, K., & Mackey, S. (2016). Enhanced secondary hyperalgesia following a pain catastrophizing induction in women with chronic low back pain. *Journal of Pain, 17*(4), S56-S56. Retrieved from [Go to ISI>://WOS:000373523000221 doi:10.1016/j.jpain.2016.01.228

Mackey, Sean/AAF-3314-2019.

- Alger, J. R., Ellingson, B. M., Ashe-McNalley, C., Woodworth, D. C., Labus, J. S., Farmer, M., Huang, L., Apkarian, A. V., Johnson, K. A., Mackey, S. C., Ness, T. J., Deutsch, G., Harris, R. E., Clauw, D. J., Glover, G. H., Parrish, T. B., den Hollander, J., Kusek, J. W., Mullins, C., Mayer, E. A., & Investigators, M. R. N. (2016). Multisite, multimodal neuroimaging of chronic urological pelvic pain: Methodology of the MAPP Research Network. *Neuroimage-Clinical*, *12*, 65-77. Retrieved from [Go to ISI>://WOS:000390196400009 doi:10.1016/j.nicl.2015.12.009
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- Stephens-Shields, A. J., Clemens, J. Q., Jemielita, T., Farrar, J., Sutcliffe, S., Hou, X., Landis, J. R., & Network, M. R. (2016). Symptom Variability and Early Symptom Regression in the MAPP Study: A Prospective Study of Urological Chronic Pelvic Pain Syndrome. *Journal of Urology*, *196*(5), 1450-1455. Retrieved from [Go to ISI>://WOS:000385954100041 doi:10.1016/j.juro.2016.04.070
- Bagarinao, Epifanio/A-5002-2012 arinao, Epifanio/0000-0001-5000-6943; Bradley, Catherine/0000-0002-7402-5476; Martucci, Katherine/0000-0002-7791-2492; Kirkali, Ziya/0000-0002-2918-4347; Parrish, Todd/0000-0002-1184-1572; Ehrlich, Garth/0000-0003-1140-6594; Landis, J Richard/0000-0001-8099-0988; Mackey, Sean/0000-0001-7744-5348; Greiner, Kris/0000-0001-7368-6478; Ness, Timothy/0000-0002-7908-4459; Luo, Yi/0000-0002-4013-6805; Kreder, Karl/0000-0002-8981-5286; Heckman, CJ/0000-0002-1324-7278.
- Kutch, J. J., Yani, M. S., Asavasopon, S., Kirages, D. J., Rana, M., Cosand, L., Labus, J. S., Kilpatrick, L. A., Ashe-McNalley, C., Farmer, M. A., Johnson, K. A., Ness, T. J., Deutsch, G., Harris, R. E., Apkarian, A. V., Clauw, D. J., Mackey, S. C., Mullins, C., & Mayer, E. A. (2015). Altered resting state neuromotor connectivity in men with chronic prostatitis/chronic pelvic pain syndrome: A MAPP Research Network Neuroimaging Study. *Neuroimage-Clinical*, *8*, 493-502. Retrieved from [Go to ISI>://WOS:000373187100053 doi:10.1016/j.nicl.2015.05.013
- Kirages, Daniel/J-7974-2016; Kutch, Jason/B-3243-2018; Mackey, Sean/AAF-3314-2019; Labus, Jennifer S/M-4567-2017 us, Jennifer S/0000-0002-6634-2551; Ness, Timothy/0000-0002-7908-4459; Mackey, Sean/0000-0001-7744-5348; Apkarian, A. Vania/0000-0002-9788-7458; Farmer, Melissa/0000-0001-6263-0583.
- Dixon, E., Benham, G., Sturgeon, J., Johnson, K., Mackey, S., & Younger, J. (2015). Development of the Sensory Hypersensitivity Scale (SHS): a self-report tool for assessing sensitivity to sensory stimuli. *Journal of Pain*, *16*(4), S18-S18. Retrieved from [Go to ISI>://WOS:000352748600071 doi:10.1016/j.jpain.2015.01.083
- Mackey, Sean/AAF-3314-2019.
- Sentis, A., Law, C., Bagarinao, E., Johnson, K., & Mackey, S. (2015). Discrete region and distributed network analysis of attention and cognitive modulation of pain. *Journal of Pain*, *16*(4), S53-S53. Retrieved from [Go to ISI>://WOS:000352748600212 doi:10.1016/j.jpain.2015.01.228
- Mackey, Sean/AAF-3314-2019; Bagarinao, Epifanio/A-5002-2012 arinao, Epifanio/0000-0001-5000-6943.

Law, C., Johnson, K., Sentis, A., Bagarinao, E., & Mackey, S. (2015). Elucidating brain regions engaged in strategies for real-time fMRI neurofeedback pain modulation. *Journal of Pain, 16*(4), S55-S55. Retrieved from [Go to ISI>://WOS:000352748600218 doi:10.1016/j.jpain.2015.01.234

Bagarinao, Epifanio/A-5002-2012; Mackey, Sean/AAF-3314-2019 arinao, Epifanio/0000-0001-5000-6943;.

Middleton, S., Nilakantan, A., Foote, A., Dixon, E., Mackey, S., Younger, J., & Johnson, K. (2015). Exploring the sensory hypersensitivity scale with quantitative sensory testing. *Journal of Pain, 16*(4), S17-S17. Retrieved from [Go to ISI>://WOS:000352748600068 doi:10.1016/j.jpain.2015.01.080

Mackey, Sean/AAF-3314-2019.

Tran, P., Nilakantan, A., Foote, A., Sturgeon, D., Mackey, S., & Johnson, K. (2015). Pain interference mediates the relationship between pain and happiness. *Journal of Pain, 16*(4), S20-S20. Retrieved from [Go to ISI>://WOS:000352748600079 doi:10.1016/j.jpain.2015.01.091

Mackey, Sean/AAF-3314-2019.

Krieger, J. N., Stephens, A. J., Landis, J. R., Clemens, J. Q., Kreder, K., Lai, H. H., Afari, N., Rodriguez, L., Schaeffer, A., Mackey, S., Andriole, G. L., Williams, D. A., & Network, M. R. (2015). Relationship between Chronic Nonurological Associated Somatic Syndromes and Symptom Severity in Urological Chronic Pelvic Pain Syndromes: Baseline Evaluation of the MAPP Study. *Journal of Urology, 193*(4), 1254-1262. Retrieved from [Go to ISI>://WOS:000352102900034 doi:10.1016/j.juro.2014.10.086

Mackey, Sean/AAF-3314-2019; Bagarinao, Epifanio/A-5002-2012 arinao, Epifanio/0000-0001-5000-6943; Ehrlich, Garth/0000-0003-1140-6594; Mackey, Sean/0000-0001-7744-5348; Landis, J Richard/0000-0001-8099-0988; Kreder, Karl/0000-0002-8981-5286; Ness, Timothy/0000-0002-7908-4459; Luo, Yi/0000-0002-4013-6805; Kirkali, Ziya/0000-0002-2918-4347.

Sawaya, H., Johnson, K., Schmidt, M., Arana, A., Chahine, G., Atoui, M., Pincus, D., George, M. S., Panksepp, J., & Nahas, Z. (2015). Resting-State Functional Connectivity of Antero-Medial Prefrontal Cortex Sub-Regions in Major Depression and Relationship to Emotional Intelligence. *International Journal of Neuropsychopharmacology, 18*(6). Retrieved from [Go to ISI>://WOS:000356700000014 doi:10.1093/ijnp/pyu112

Lang, Steven/AAE-8102-2021 g, Steven/0000-0003-1669-9146; Nahas, Ziad/0000-0002-8391-5673.

Johnson, K., Foote, A., Kao, M., & Mackey, S. (2015). Somatic distributions of pain characterized with a pain registry (CHOIR). *Journal of Pain, 16*(4), S8-S8. Retrieved from [Go to ISI>://WOS:000352748600030 doi:10.1016/j.jpain.2015.01.042

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Martucci, K. T., Shirer, W. R., Bagarinao, E., Johnson, K. A., Farmer, M. A., Labus, J. S., Apkarian, A. V., Deutsch, G., Harris, R. E., Mayer, E. A., Clauw, D. J., Greicius, M. D.,

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Woodworth, D., Mayer, E., Leu, K., Ashe-McNalley, C., Naliboff, B. D., Labus, J. S., Tillisch, K., Kutch, J. J., Farmer, M. A., Apkarian, A. V., Johnson, K. A., Mackey, S. C., Ness, T. J., Landis, J. R., Deutsch, G., Harris, R. E., Clauw, D. J., Mullins, C., Ellingson, B. M., & Network, M. R. (2015). Unique Microstructural Changes in the Brain Associated with Urological Chronic Pelvic Pain Syndrome (UCPPS) Revealed by Diffusion Tensor MRI, Super-Resolution Track Density Imaging, and Statistical Parameter Mapping: A MAPP Network Neuroimaging Study. *Plos One, 10*(10). Retrieved from [Go to ISI>://WOS:000362962300073 doi:10.1371/journal.pone.0140250

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Taub, C., Johnson, K., Nilakantan, A., Foote, A., Wagner, A., Greely, H., Glover, G., & Mackey, S. (2014). Does past experience impact the brain regions active during the imagery of catastrophic pain? *Journal of Pain, 15*(4), S56-S56. Retrieved from [Go to ISI>://WOS:000334648700221 doi:10.1016/j.jpain.2014.01.231

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- Mackey, Sean/AAF-3314-2019 h, Julia/0000-0002-2805-0339; Mackey, Sean/0000-0001-7744-5348.
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10 International Congress of Parkinsons Disease and Movement Disorders 05-08, 2005 Orleans, LA.

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Kozel, Frank A/I-5366-2012 h Annual Meeting of the American-College-Neuropsychopharmacology 11-15, 2005 koloa, HI derbilt Univ Sch Med Dept Psychiat.

Nahas, Z., Molnar, C., Ramsey, D., Walker, J., Koola, J., Johnson, K., Kozel, F. A., Li, X. B., Christie, S., Nnadi, P., Denslow, S., Bohning, D. E., & George, M. S. (2005). Prefrontal cortical excitability in non-medicated schizophrenia subjects using interleaved TMSfMRI. *Biological Psychiatry*, 57(8), 193S-193S. Retrieved from [Go to ISI>://WOS:000228338601296

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Johnson, K. A., Mu, Q., Yamanaka, K., Mishory, A., Koola, J., Hill, S., Horner, M. D., Nahas, Z., Bohning, D. E., & George, M. S. (2005). Repeatability of Within-Individual BOLD

fMRI Maps of a Working Memory Task for TMS Targeting. *Neuroscience Imaging*, 1(1), 95-111.

Mu, Q. W., Bohning, D. E., Nahas, Z., Walker, J., Anderson, B., Johnson, K. A., Denslow, S., Lomarev, M., Moghadam, P., Chae, J. H., & George, M. S. (2004). Acute vagus nerve stimulation using different pulse widths produces varying brain effects. *Biological Psychiatry*, 55(8), 816-825. Retrieved from [Go to ISI>://WOS:000220755100007 doi:10.1016/j.biopsych.2003.12.004

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Kozel, F. A., Johnson, K. A., Mu, Q. W., Grenesko, E. L., Laken, S. J., & George, M. S. (2004). Developing functional MRI detection of deception. *Neuropsychopharmacology*, 29, S84-S85. Retrieved from [Go to ISI>://WOS:000225588000249

Kozel, Frank A/I-5366-2012 ual Meeting of the American-College-of-Neuropsychopharmacology 12-16, 2004 Juan, PR derbilt Univ, Sch Med, Dept Psychiatry; Amer Coll Neuropsychopharmacol.

Invited Book Chapters

Nahas, Z., Kozel, F. A., Molnar, C., Ramsey, D., Holt, R., Ricci, R., Johnson, K. A., Koola, J., & George, M. S. (2007). Methods of Administering Transcranial Magnetic Stimulation. In Mark S. George, & Robert H. Belmaker (Eds.), *Transcranial Magnetic Stimulation in Clinical Psychiatry* (pp. 39-58). Washington, DC: American Psychiatric Publishing.

George, M. S., Bohning, D. E., Li, X., Nahas, Z., Denslow, S., Ramsey, D., Molnar, C., Johnson, K. A., Koola, J., & De Vries, P. (2007). Transcranial Magnetic Stimulation and Brain Imaging. In Mark S. George, & Robert H. Belmaker (Eds.), *Transcranial Magnetic Stimulation in Clinical Psychiatry* (pp. 201-224). Washington, DC: American Psychiatric Publishing.

Nonrefereed Reports

Frandsen, S., Glover, C., Cash, R., Blumberger, D., Choi, K. S., Dougherty, D., Downar, J., Fitzgerald, P., George, M., Horn, A., Grospietsch, F., Johnson, K., Kuhn, A., Mayberg, H., Pascual-Leone, A., Riva-Posse, P., Rouhl, R., Schaper, F., Et al., & Siddiqi, S. (2024). *A dual-circuit causal model of depression in humans*. Research Square. Retrieved from <https://doi.org/10.21203/rs.3.rs-3754811/v1>

Johnson, K. A., Ramsey, D., Kozel, F. A., Bohning, D. E., Anderson, B., Nahas, Z., Sackeim, H. A., & George, M. S. (2006). *Using imaging to target the prefrontal cortex for transcranial magnetic stimulation studies in treatment-resistant depression* (ISSN 1294-8322). Dialogues in Clinical Neuroscience 8(2). Les Laboratoires Servier.

Presentations

Refereed Presentations at Conferences

Senda, M. C., Johnson, K. A., Taylor, I. M., Jensen Mariah M, & Kozel, F. A. (presented 2023, August). *Accelerating Relief from Dysphoria (Depression, Anxiety, PTSD, and/or Chronic Pain) Using a Stepwise Progression of Virtual Reality and Brain Stimulation*. Poster presentation at Military Health System and Research Symposium, U. S. Department of Defense. (National)

Johnson, K. A., Senda, M. C., Taylor, I. M., Jensen, M. M., & Kozel, F. A. (presented 2023, May). *Minimal Impact of VR, Accelerated dlPFC TMS and Accelerated mPFC on Pain Interference*. Poster presentation at 2023 Annual Meeting, Clinical TMS Society, Colorado Springs, CO. (International)

Senda, M. C., Johnson, K. A., Taylor, I. M., Jensen, M. M., & Kozel, F. A. (presented 2023, May). *Sequenced Pilot Trial using Virtual Reality followed by two different Accelerated TMS Protocols for Treating Dysphoria*. Poster presentation at 2023 Annual Meeting, Clinical TMS Society, Colorado Springs, CO. (International)

Kozel, F. A., Senda, M. C., Taylor, I. M., Jensen, M. M., & Johnson, K. A. (presented 2022, December). *Treating Transdiagnostic Dysphoria Using A Sequence of Virtual Reality and Two Accelerated Transcranial Magnetic Stimulation Protocols*. Poster presentation at 61st Annual Meeting of ACNP, American College of Neuropsychopharmacology, Phoenix, AZ. (National)

Johnson, K. A., Senda, M. C., Taylor, I. M., Motes, M. M., Morris, E. E., Hart, J., & Kozel, F. A. (presented 2022, May). *Multi-site confirmatory treatment trial of Transcranial Magnetic Stimulation (TMS) with Cognitive Processing Therapy (CPT) for combat-related PTSD*. Presentation at 2022 Annual Meeting, Clinical TMS Society. (International)

Nonrefereed Presentations at Conferences

Nesmith, N., Senda, M. C., Kozel, F. A., Taylor, I. M., Spitz, A. M., & Johnson, K. A. (presented 2024, February). *Characterizing Scalp Tolerability of TMS*. Presentation at FSU College of Medicine Annual Research Fair, Florida State University, Tallahassee, FL. (State)

Jensen, M. M., Senda, M. C., Moore, C., Johnson, K. A., & Kozel, F. A. (presented 2024, February). *Quality Assessment Project: Transcranial Magnetic Stimulation Clinic Patient Outcomes at FSU Neuromodulation™*. Presentation at FSU College of Medicine Annual Research Fair, Florida State University, Tallahassee, FL. (State)

Spitz, A. M., Senda, M. C., Taylor, I. M., Jensen, M. M., Johnson, K. A., & Kozel, F. A. (presented 2024, February). *The Relationship of Anxious Arousal in the Treatment of*

Dysphoria Using VR Mindfulness and Accelerated-TMS. Presentation at FSU College of Medicine Annual Research Fair, Florida State University, Tallahassee, FL. (State)

Saini, N., Senda, M. C., Taylor, I. M., Johnson, K. A., & Kozel, F. A. (presented 2023, February). *Community Perception of Neuromodulation*. Poster presentation at FSU College of Medicine Annual Research Fair, Florida State University. (State)

Senda, M. C., Taylor, I. M., Jensen, M. M., Johnson, K. A., & Kozel, F. A. (presented 2023, February). *Treating Transdiagnostic Dysphoria Using a Sequence of Virtual Reality and Two Accelerated Transcranial Magnetic Stimulation Protocols*. Presentation at FSU College of Medicine Annual Research Fair, Florida State University, Tallahassee, FL. (State)

Patented Inventions

Kozel, F. A., & Johnson, K. A. (submitted). *fNIRS for Dosing Transcranial Magnetic Brain Stimulation*. Florida State University.

Johnson, K. A., Kozel, F. A., & Standley, J. (submitted). *Classical Conditioning of Neuromodulation with Synchronized Musical Stimulation*. Florida State University.

Contracts and Grants

Contracts and Grants Funded

Kozel, F. A., & Johnson, K. A. (Sep 2024–Sep 2028). *Rapid Treatment of PTSD with Accelerated Non-Invasive Brain Stimulation*. Funded by U. S. Department of Defense. Total award \$2,997,629.

This study will test the clinical efficacy of an accelerated TMS (accel-TMS) protocol that rapidly addresses PTSD symptoms with 1 week (25 sessions over 5 days) of condensed treatment. Building on remarkable findings from our open-label trial as well as our case series from the VA, this study will optimize our approach to inform a future multi-site pivotal study.

Kozel, F. A., & Johnson, K. A. (Aug 2023–Aug 2026). *Personalized Dosing of Non-invasive Brain Stimulation Using fNIRS-TMS Technology*. Funded by U. S. Department of Defense. Total award \$1,442,341.

The objective is to develop transcranial magnetic stimulation (TMS) integrated with functional near infrared spectroscopy (TMS-fNIRS) for a more personalized and effective treatment of PTSD. In addition, we will assess the impact of history of mTBI on cortical stimulation using TMS in participants with PTSD.

Flynn, H., Ahn, H., Chandler, G., Spence, N. E., Harman, J., Johnson, K. A., Kozel, F. A., Newsome, M., Shartzter, T., & Worts, P. (Sep 2022–Aug 2023). *Development of novel biopsychosocial approaches to pain management integrated in community orthopedic clinics*. Funded by Translational Health Research Seed Grant Award. Total award \$94,750.

Martorella, G., Ahn, H., Johnson, K. A., Miao, H., Park, L., & Worts, P. (May 2022–May 2022). *Brain stimulation and meditation for pain after knee surgery*. Funded by Institute for Successful Longevity. Total award \$25,000.

Hart, J., Kozel, F. A., Kraut, M., Burruss, J., & Johnson, K. A. (Aug 2020–Jul 2024). *Multi-site confirmatory efficacy treatment trial of combat-related PTSD*. Funded by U. S. Department of Defense. Total award \$815,180.

Testing effectiveness of repetitive Transcranial Magnetic Stimulation (rTMS) with Cognitive Processing Therapy compared to sham rTMS + CPT versus rTMS alone to treat trauma and mood symptoms in Veterans with PTSD.

Resource Grant

Johnson, K. A., & Kozel, F. A. (2022, March–2025, February). A grant of Clinical Trial Agreement - Research Device Loan. *Neuromodulation in Dysphoria – Phase 2: Accelerated Transcranial Magnetic Stimulation*. Sponsored by Neuronetics Inc.

Service

Florida State University

FSU University Service

Chair, Data Safety Monitoring Board (RO1 DK125728) (2022–present).

Resistance Training Modulation of Fat Metabolism in Obese Postmenopausal Women (RO1 DK125728, Contact PI/Project Leader Hickner, Robert C).

Member, Institutional Review Board/Human Subjects (2021–present).

FSU Program Service

Registered Nurse, Florida Medical Practice Plan, Inc. (TMS Clinic) (2021–present).

The Profession

Editor for Refereed Journals

Deputy Editor, Special Issues, Regulatory Affairs, *Transcranial Magnetic Stimulation* (2024–present).

Assigned Industry/Regulatory/Pain/Mood/Trauma.

Reviewer or Panelist for Grant Applications

Department of Defense - Congressionally Directed Medical Research Programs (2024).

Fiscal Year 2023 Chronic Pain Management Research Program Peer Reviewers.

Department of Defense - Congressionally Directed Medical Research Programs (2022).

Fiscal Year 2022 Chronic Pain Management Research Program Peer Reviewers.

National Institutes of Health (2022).

Center for Scientific Review Special Emphasis Panel ZRG1 NV-Q (91) Special Topics: Noninvasive Neuromodulation and Neuroimaging Technologies.

Department of Defense - Congressionally Directed Medical Research Programs (2022).

Fiscal Year 2021 Chronic Pain Management Research Program Peer Reviewers.

Consultation

Brainscape Medical. Scientific Advisory Board Member (2025–present).

Advise Connect Inspire, LLC. Strategic Consultant for Early Stage Neurotechnology Companies (2022–2024).