

# KELSEY A. BAKER, PH.D.

*Curriculum Vitae*

kelsey.baker@utrgv.edu

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## PROFESSIONAL EXPERIENCE

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*The University of Texas Rio Grande Valley (UTRGV)*  
*Department of Health and Biomedical Sciences*  
Assistant Professor of Biomedical Engineering Research  
Brownsville, Texas  
December 2018 to Present

*The University of Texas Rio Grande Valley (UTRGV)*  
*Department of Health and Biomedical Sciences*  
Part-Time Lecturer  
Brownsville, Texas  
August 2018 to December 2018

*Louis Stokes Cleveland Department of Veteran's Affairs Medical Center*  
*Advanced Platform Technology (APT) Center*  
Research Investigator  
Cleveland, Ohio  
September 2016 to Present

*Cleveland Clinic Foundation, Department of Biomedical Engineering*  
Research Scientist  
Cleveland, Ohio  
December 2016 to Present

*Cleveland Clinic Foundation, Department of Biomedical Engineering*  
Postdoctoral Research Fellow  
Mentor: Ela B. Plow, PT PhD  
Cleveland, Ohio  
April 2014 to December 2016

*Case Western Reserve University, Department of Biomedical Engineering*  
Graduate Research Assistant  
Research Advisor: Jeffrey R. Capadona, PhD  
Cleveland, Ohio  
June 2009 to April 2014

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## EDUCATION

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*Case Western Reserve University (CWRU), Cleveland, Ohio*  
March 2014

**Doctor of Philosophy**, Biomedical Engineering

Thesis Title: Anti-oxidative Approaches to Improve Neuronal Viability Surrounding Implanted Intracortical Microelectrodes

Thesis Advisor: Jeffrey R. Capadona, PhD

*University of Utah, Salt Lake City, Utah*  
December 2008

**Bachelor of Science**, Biomedical Engineering, Minor: Chemistry

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## PUBLICATIONS

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**H-Index: 10**

**i10-Index: 13**

### IN PRESS

1. **K.A. Potter-Baker\***, D.P. Janini, Y.-L. Lin, V. Sankarasubramanian, D.A. Cunningham, N.M. Varnerin, P. Chabra, K.L. Kilgore, M. Richmond, F.S. Frost and E.B. Plow, "Transcranial direct current stimulation (tDCS) paired with massed practice training to promote adaptive plasticity and motor recovery in chronic incomplete tetraplegia: A pilot study." *Journal of Spinal Cord Medicine*. 2018. *In Press*.

### PUBLISHED

1. **K.A. Potter-Baker\***, Y.-L. Lin, A.G. Machado, A.B. Conforto, D.A. Cunningham, V. Sankarasubramanian, K. Sakaie and E.B. Plow, "Variability of Motor Evoked Potentials in Stroke explained by Corticospinal Pathway Integrity." *Brain Stimulation*. 2018. 11(4):929-931. [PMID: 29563050](#).

2. **K.A. Potter-Baker\***, Y.-L. Lin and E.B. Plow, "Understanding cortical topographical changes in liminally-contractable muscles in SCI: Importance of all mechanisms of neural dysfunction." *Spinal Cord*. 2017. 55:882-884. **COVER**. [PMID: 28607523](#).
3. Y.-L. Lin and **K.A. Potter-Baker**, "Using theoretical models from adult stroke recovery to improve use of non-invasive brain stimulation for children with congenital hemiparesis." *Journal of Neurophysiology*. 2017. 118(3):1435-1438. [PMID: 28539399](#).
4. E.B. Plow, V. Sankarasubramanian, **K.A. Potter-Baker**, and Y.-L. Lin, "Reply to: Need for updating safety recommendations on repetitive transcranial magnetic stimulation in stroke patients." *Clinical Neurophysiology*. 2017. 128(8):1544-1545. [PMID: 28662931](#).
5. V. Sankarasubramanian, A.G. Machado, A. Conforto, **K.A. Potter-Baker**, D.A. Cunningham, N. Varnerin, X. Wang, K. Sakaie and E.B. Plow, "Inhibition versus facilitation of contralesional motor cortices in stroke: Deriving a model to tailor brain stimulation." *Clinical Neurophysiology*. 2017. 128(6):892-902. [PMID: 28402865](#).
6. V. Sankarasubramanian, D.A. Cunningham, **K.A. Potter-Baker**, E. Beall, S. Roelle, N. Varnerin, A. Machado, S. Jones, M. Lowe and E.B. Plow, "Transcranial direct current stimulation targeting primary motor vs. dorsolateral prefrontal cortices: proof-of-concept study investigating functional connectivity of thalamo-cortical networks specific to sensory-affective information processing." *Brain Connectivity*. 2017. 7(3):182-196. [PMID: 28142257](#).
7. N. Varnerin, J. Cardenas, D. Mirando, **K.A. Potter-Baker**, D.A. Cunningham, V. Sankarasubramanian, E. Beall and E.B. Plow, "Assessment of Vascular Stent Heating with Repetitive Transcranial Magnetic Stimulation (rTMS)." *Journal of Stroke and Cerebrovascular Diseases*. 2017. 26(5):1121-1127. [PMID: 28117211](#).
8. D.A. Cunningham, S. Roelle, D. Allexandre, **K.A. Potter-Baker**, V. Sankarasubramanian, J.S. Knutson, G.H. Yue, A. Machado and E.B. Plow, "The effect of motor overflow on asymmetric force coordination." *Experimental Brain Research*. 2017. 234(4):1097-1105. [PMID: 28091708](#).
9. **K.A. Potter-Baker\***, D.P. Janini, F.S. Frost, P. Chabra, N. Varnerin, D.A. Cunningham, V. Sankarasubramanian and E.B. Plow, "Reliability of TMS metrics in patients with chronic incomplete spinal cord injury." *Spinal Cord*. 2016. 54(11):980-990. [PMID: 27045553](#).
10. D.A. Cunningham, D.P. Janini, A. Wyant, C. Bonnett, N. Varnerin, V. Sankarasubramanian, **K.A. Potter-Baker**, S. Roelle, X. Wang, V. Siemionow, G.H. Yue and E.B. Plow, "Post-exercise depression following submaximal and maximal isometric voluntary contraction." *Neuroscience*. 2016. 326: 95-104. [PMID: 27058145](#).
11. **K.A. Potter-Baker\***, C. E. Bonnett, P.M. Chabra, S. Roelle, N. Varnerin, D.A. Cunningham, V. Sankarasubramanian, S. Pundik, A.B. Conforto, A. G. Machado and E.B. Plow, "Challenges in Recruitment for the Study of Noninvasive Brain Stimulation in Stroke: Lessons from Deep Brain Stimulation." *Journal of Stroke & Cerebrovascular Diseases*. 2016. 25(4):927-937. [PMID: 26851211](#).
12. **K.A. Potter-Baker\***, N.M. Varnerin, D.A. Cunningham, S.M. Roelle, V. Sankarasubramanian, A. Machado, A.B. Conforto, K. Sakaie, and E.B. Plow, "Influence of Corticospinal Tracts from Higher Order Motor Cortices on Recruitment Curve Properties in Stroke". *Frontiers in Neuroscience*. 2016. 10:79. [PMID: 27013942](#).
13. E.B. Plow, V. Sankarasubramanian, D.A. Cunningham, **K.A. Potter-Baker**, N. Varnerin, L. Cohen, A. Sterr, A.B. Conforto and A.G. Machado, "Models to Tailor Brain Stimulation Therapies in Stroke." *Neural Plasticity*. 2016, 4071620: 1-17. [PMID: 27006833](#).
14. D.A. Cunningham, N. Varnerin, A.G. Machado, C. Bonnett, D.P. Janini, S. Roelle, **K.A. Potter-Baker**, V. Sankarasubramanian, X. Wang, G. Yue and E.B. Plow, "Stimulation targeting higher motor areas in stroke rehabilitation: A proof-of-concept, randomized, double-blinded placebo-controlled study of effectiveness and underlying mechanism." *Restorative Neurology and Neuroscience*. 2015, 33(6): 911-926. [PMID: 26484700](#).
15. D.A. Cunningham, **K.A. Potter-Baker**, J.S. Knutson, V. Sankarasubramanian, A.G. Machado and E.B. Plow, "Tailoring brain stimulation to the nature of rehabilitative therapies in stroke- a conceptual framework based on their unique mechanisms of recovery" *Physical Medicine and Rehabilitation Clinics of North America*. 2015, 26(4): 759-774. [PMID: 26522911](#).
16. **K.A. Potter-Baker\***, C. Bonnett, P.M. Chabra, S. Roelle, N. Varnerin, D.A. Cunningham, V. Sankarasubramanian, S. Pundik, A.B. Conforto, A. Machado and E.B. Plow, "A Game of Hide and Seek: Is it possible to recruit more patients for NIBS studies in stroke?" *Journal of the Neurological Sciences*. 2015, 358: 472-474. [PMID: 26320611](#).
17. V. Sankarasubramanian, S. Roelle, C.E. Bonnett, D.P. Janini, N. Varnerin, D.A. Cunningham, J.S. Sharma, **K.A. Potter-Baker**, X. Wang, G.H. Yue and E.B. Plow, "Reproducibility of TMS metrics in the study of proximal upper limb muscles." *Journal of Electromyography and Kinesiology*. 2015, 25(5): 754-764. [PMID: 26111434](#).
18. E.B. Plow, **K.A. Potter-Baker** and P. Chabra, "Using the Brain to Improve Rehab in Spinal Cord Injury Patients". *Frontiers in Rehabilitation*. 2014, pp. 6-8. (<http://consultqd.clevelandclinic.org/2014/11/using-the-brain-to-improve-rehab-in-spinal-cord-injury-patients/>)

19. M. Jorfi, **K.A. Potter**, J.K. Nguyen, A.E. Hess-Dunning, E. Johan Foster, J.R. Capadona and C. Weder, "Mechanically adaptive materials for intracortical implants." *7<sup>th</sup> International IEEE/EMBS Conference on Neural Engineering*. 2015. 601-602.
20. **K.A. Potter-Baker\***, W.G. Stewart, W.D. Meador, W.H. Tomaszewski, N.P. Ziats and J.R. Capadona, "Implications of Daily Antioxidant Administration on the Chronic Inflammatory Response to Intracortical Microelectrodes." *Journal of Neural Engineering*. 2015, 12(4): 045002. [PMID: 26015427](#).
21. **K.A. Potter-Baker\*** and J.R. Capadona, "Reducing the "Stress": Anti-oxidative Therapeutic and Material Approaches May Prevent Intracortical Microelectrode Failure." *ACS Macro Letters*. 2015, 4(3): 275-279. **COVER**
22. **K.A. Potter-Baker\***, M. Ravikumar\*, A.A. Burke, W.D. Meador, K.T. Householder, A.C. Buck, S. Sunil, W.G. Stewart, J.P. Anna, W.H. Tomaszewski and J.R. Capadona, "A Comparison of Neuroinflammation to Implanted Microelectrodes in Rat and Mouse Models." *Biomaterials*. 2014, 35(22): 5637-5646. [PMID: 24755527](#).
23. **K.A. Potter-Baker\***, J.K. Nguyen\*, K. Kovach, M.M. Gitomer, T.W. Srail, W.G. Stewart, J.L. Skousen, and J.R. Capadona, "Development of superoxide dismutase mimetic surfaces to reduce accumulation of reactive oxygen species." *Journal of Materials Chemistry B*. 2014, 2(16): 2248-2258. [PMID: PMC4131700](#).
24. **K.A. Potter\***, M. Jorfi\*, K.T. Householder, J. Foster, C. Weder and J.R. Capadona, "Curcumin-releasing Mechanically Compliant Implants Prevent Neurodegeneration and Blood Brain Barrier Instability at the Implant-Tissue Interface." *Acta Biomaterialia*. 2014, 10(5): 2209-2222. [PMID: 24468582](#).
25. A.E. Hess, **K.A. Potter**, C.A. Zorman, and J.R. Capadona. "Environmentally-controlled Microtensile Testing of Mechanically-Dynamic Polymer Nanocomposites for Ex Vivo Characterization." *Journal of Visualized Experiments*, 2013, 20(78). [PMID: 23995288](#).
26. **K.A. Potter\***, A.C. Buck, W.K. Self, M.E. Callanan, S. Sunil and J.R. Capadona, "The Effect of Resveratrol on Neurodegeneration and Blood Brain Barrier Stability Surrounding Intracortical Microelectrodes." *Biomaterials*, 2013, 34(29):7001-7015. [PMID: 23791503](#).
27. **K.A. Potter\***, A.C. Buck, W.K. Self, J.R. Capadona. "Stab Injury and Device Implantation within the Brain Results in Inversely Multiphasic Neuroinflammatory and Neurodegenerative Responses." *Journal of Neural Engineering*, 2012, 9; 046020. [PMID: 22832283](#).
28. **K.A. Potter\***, J.S. Simon, B. Velagapudi, J.R. Capadona. "Reduction of autofluorescence at the microelectrode-cortical tissue interface improves antibody detection." *J. Neurosci Meth*. 2012, 203(1); 96-105. [PMID: 21978484](#).

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## BOOK CHAPTERS

1. **K.A. Potter**, B. Gui, and J.R. Capadona. Chapter 3, "Biomimicry at the cell-material interface," *Biomimetics - Innovation thru mimicking nature's inventions*; CRC Press, 2011.
2. D.A. Cunningham, Y.-L. Lin, **K.A. Potter-Baker**, J.S. Knutson, E.B. Plow. Efficacy of non-invasive brain stimulation for motor rehabilitation after stroke. In: Wilson RD, Raghavan P. (eds) *Stroke Rehabilitation*. Elsevier. [In Revision]

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## TEACHING

### UTRGV Lecturer - Fall Semester 2018

- BMED 1101: Introductory Medical Biochemistry
- BMED 1104: Introductory Molecular Biology
- BMED 1103: Introductory Cell Biology
- BMED 2102: Molecules, Cells & Tissues
- BMED 3223: Independent Research III

### CWRU Graduate Teaching Assistant

- **EBME 360: Biomedical Instrumentation Laboratory**, Lead TA, Case Western Reserve University, Cleveland, OH, Spring 2013.
- **ENGR 210: Introduction to Circuits and Instrumentation**, Homework and Review TA, Case Western Reserve University, Cleveland, OH, Fall 2012.
- **EBME 306: Introduction to Biomaterials**, Case Western Reserve University, Cleveland, OH, Fall 2010.

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## HONORS AND AWARDS

- Bors Award, Academy of Spinal Cord Injury Professionals, September 2018.
- Academy of Spinal Cord Injury Professionals Outstanding Trainee Research Award, September 2016.
- Post-Doctoral Alumni Career Development Award Recipient, Cleveland Clinic Foundation, October 2015.
- 2014 Acta Biomaterialia Student Award Recipient. A \$2,000 award based on publication merit, July 2015.

- Selected to Attend NextProf Networking Event, University of Michigan, Ann Arbor, MI, September 2015.
- Post-doctoral Travel Award, Department of Biomedical Engineering, Cleveland Clinic Foundation, September 2014.
- Outstanding Poster Award Winner at Biomedical Graduate Student Symposium, May 2013.
- Neural Interfacing Conference Diversity Travel Award Recipient, June 2012.
- Art of Science Contest Winner, May 2012.
- Medtronic Fellow, Case Western Reserve University, 2009-2012.
- *Daniel E. Adams Award for Outstanding Service to Residential Education*, University of Utah, Awarded May 2008.
- *Wendy's Scholarship*, Wendy's Corporation, August 2004 to May 2005. A \$1,000-one year scholarship.
- *Top Ten Scholarship*, University of Utah, Salt Lake City, Utah, August 2004 to May 2005.

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## PROFESSIONAL AFFILIATIONS

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Society for Neuroscience, American Society of Neurorehabilitation, Biomedical Engineering Society, Society for Biomaterials

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## SERVICE

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- AIBS Grant Reviewer – SCIRB 2018 Rehabilitation Panel 2018, SCIRB 2018 Fellowship Panel
- Programming Committee Member of the American Society of Neurorehabilitation, January 2017 – Present
- Committee member of the Institutional Review Board (IRB) at the Louis Stokes Cleveland Department of Veterans' Affairs Medical Center, December 2016 – June 2018
- Research & Development Committee Member for Advanced Platform Technology (APT) Center, December 2015 – June 2018
- Scientific Reviewer: *Journal of Neural Engineering*, *Acta Biomaterialia*, *Frontiers in Neuroscience*, *Brain Research*, *European Journal of Pharmaceutics and Biopharmaceutics*, *Human Brain Mapping*, *Neuromodulation*
- Member of Women in Science and Engineering Roundtable (WISER), August 2009 – April 2014.
- Vice President of Department of Biomedical Engineering Graduate Student Association, May 2012 – May 2013.
- Mentor undergraduate and graduate biomedical engineering students as part of WISER, August 2009 – May 2012.
- Department of Biomedical Engineering Student Senator, May 2011 – May 2012.
- Graduate Student Council Professional Liaison, May 2010 – December 2010.

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## PRESS RELEASES AND ONLINE FEATURES

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1. Press release highlighting award of the Ernest Bors, MD Award from the Academy of Spinal Cord Injury Professionals  
[https://www.eurekalert.org/pub\\_releases/2018-08/kf-jos082918.php](https://www.eurekalert.org/pub_releases/2018-08/kf-jos082918.php)
2. "Brain Stimulation Research for Spinal Cord Injury Rehab Draws \$2.5M DoD Grant." June 2018. ConsultQD  
A feature in the Consult QD at the Cleveland Clinic highlighting the awarding of two DoD grants worth over \$2.5M dollars.  
<https://consultqd.clevelandclinic.org/brain-stimulation-research-for-spinal-cord-injury-rehab-draws-2-5m-dod-grant/>
3. "Transcranial Direct Current Stimulation Improves Function in Chronic Incomplete Tetraplegia." September 2017. ConsultQD  
A feature in the Consult QD at the Cleveland Clinic highlighting the 2017 Journal of Spinal Cord Medicine research article.  
<https://consultqd.clevelandclinic.org/2017/09/transcranial-direct-current-stimulation-improves-function-in-chronic-incomplete-tetraplegia/>
4. "Personalizing Rehabilitation and Brain Stimulation." January 2016. ConsultQD.  
A feature in the Consult QD at the Cleveland Clinic highlighting how our research was being used to maximize neurorecovery in patients with stroke.  
<https://consultqd.clevelandclinic.org/personalizing-rehabilitation-brain-stimulation/>

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## GRANT FUNDING

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### CURRENT

Department of Defense	Baker (PI)	\$127,309	11/1/2018 – 09/30/2019
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*Temporary Inactivation of Strong Muscle Sensation to Improve Rehabilitation Interventions in SCI*  
This is a Clinical Research Development Award to initiate a clinical trial that will evaluate the use of temporary inactivation of strong muscle sensation to improve function of surrounding weaker muscles in the upper limb after SCI

Department of Defense Baker (Co-I; Site PI) \$1,999,968 10/1/2018 – 09/30/2023  
*Improving Spinal Cord Injury Rehabilitation Interventions by Retraining the Brain*  
This is a Clinical Trial Award that will employ a Phase-II clinical trial to evaluate the efficacy of transcranial direct current stimulation in populations of spinal cord injury.

Department of Veteran's Affairs Potter-Baker (PI) \$162,531 12/1/2018 – 09/30/2020  
*Brain Stimulation to Alleviate Weakness and Maladaptive Plasticity in SCI*  
This is a Career Development Award – 1. It provides salary funding for the PI to perform a research project and gain additional mentoring in new science techniques.

Mellen Imaging Institute Potter-Baker (PI) \$15,000 1/1/2017 – 1/1/2019  
*Feasibility of using non-invasive brain stimulation to enhance motor recovery in patients with incomplete spinal cord injury*

Research Program Committee (RPC) Potter-Baker (PI) \$20,000 05/16/2016-05/16/2019  
*Feasibility of enhancing motor recovery in patients with incomplete spinal cord injury using non-invasive brain stimulation*

#### **PAST**

Conquer Paralysis Now Potter-Baker (Co-I) \$50,000 10/1/2015 – 10/1/2017  
*Improving Spinal Cord Injury Rehabilitation Interventions by Retraining the Brain with Stimulation: Applying Concepts from Stroke*

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#### **NAMED LECTURES**

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1. Jayanthi Lecture, Academy of Spinal Cord Injury Professionals, Denver, CO. September 2017.  
“It’s all in your head: Driving cortical plasticity to improve muscle contraction below the level of injury”

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#### **WEBINARS**

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1. “Transcranial Direct Current Stimulation with Massed Practice to Alleviate Maladaptive Plasticity.” Academy of Spinal Cord Injury Professionals. June 2017.  
<http://www.cvent.com/events/ascip-on-demand-webinars/custom-38-060b1cab06a745aaaf45771cdec28993.aspx>  
A 60-minute webinar that defined fundamental neurophysiological changes that occur after SCI, non-invasive neuromodulation techniques that can be used diagnostically or therapeutically in SCI; and whether massed practice rehabilitation paired with non-invasive brain stimulation can alleviate maladaptive plasticity in incomplete SCI.

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#### **PLATFORM PRESENTATIONS (SELF)**

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1. **K.A. Baker**, Michael Borich, Ela Plow, Trisha Kesar, Robert Chen. “Can TMS Serve as a Useful Measurement Tool in Rehabilitation and Neurology?” Panel Symposia, ACRM Conference, Dallas, TX, 2018.
2. **K.A. Potter-Baker**, F.S. Frost and E.B. Plow. “Brain Stimulation for SCI: To Focus or Not to Focus, that is the Question!” Academy of Spinal Cord Injury Professionals, New Orleans, LA 2018.
3. **K.A. Potter-Baker**, F.S. Frost and E.B. Plow. “Beyond the AIS: The potential of defining incompleteness of injury with neurophysiology.” Academy of Spinal Cord Injury Professionals, Denver, CO. 2017.
4. **K.A. Potter-Baker**, D.P. Janini, F.S. Frost, N.M. Varnerin, D.A. Cunningham, V. Sankarasubramanian and E.B. Plow. “A Picture is worth 1000 Words: The Potential of Defining Incompleteness of Injury with Neuroimaging and Brain Neurophysiology”. Academy of Spinal Cord Injury Professionals, Nashville, TN. 2016.
5. **K.A. Potter-Baker**, D.P. Janini, F.S. Frost, N.M. Varnerin, D.A. Cunningham, V. Sankarasubramanian and E.B. Plow. “Transcranial Direct Current Stimulation with Massed Practice to Alleviate Maladaptive Plasticity”. Academy of Spinal Cord Injury Professionals, Nashville, TN. 2016.
6. **K.A. Potter-Baker**, D.P. Janini, F.S. Frost, N.M. Varnerin, D.A. Cunningham, V. Sankarasubramanian and E.B. Plow. “Towards Improving Reliability of Transcranial Magnetic Stimulation (TMS) Metrics in Individuals with Spinal Cord Injury (SCI)”. Academy of Spinal Cord Injury Professionals, Nashville, TN. 2016.
7. **K.A. Potter-Baker**, D.P. Janini, N.M. Varnerin, D.A. Cunningham, V. Sankarasubramanian, K.E. Sakaie, F.S. Frost and E.B. Plow. “Enhancing cortical representational plasticity with non-invasive direct current stimulation to accelerate upper limb recovery in quadriplegia”. Society for Neuroscience, Chicago, IL. 2015.
8. **K.A. Potter-Baker**, D.P. Janini, N.M. Varnerin, D.A. Cunningham, V. Sankarasubramanian, K.E. Sakaie, F.S. Frost and E.B. Plow. “Enhancing cortical representational plasticity with non-invasive direct current stimulation to accelerate upper limb recovery in quadriplegia”. American Society for Neurorehabilitation, Chicago, IL. 2015.

9. **K.A. Potter-Baker**, D.P. Janini, F.S. Frost and E.B. Plow. “Using the Brain to Prognosticate Baseline Function and Rehabilitation-related Recovery Potential in Quadriplegia”. Academy of Spinal Cord Injury Professionals, New Orleans, LA. 2015.
10. J. Nguyen, **K.A. Potter**, J. Skousen, A. Hess, D.J. Tyler, S. Rowan, C. Weder, J.R. Capadona. “The Chronic Neuroinflammatory Response to Mechanically-Adaptive Polymer Implants” Society For Biomaterials, Biomaterials Day 2013, Case Western Reserve University, 2013.
11. **K.A. Potter**, J.K. Nguyen, K. Kovach, J.L. Skousen and J.R. Capadona. “Characterization and Deployment of Engineered Systems Capable of Reducing Oxidative Stress Surrounding Intracortical Microelectrodes”. Biomaterials Day, Cleveland OH. 2013.
12. J. Nguyen, **K.A. Potter**, J. Skousen, A. Hess, D.J. Tyler, S. Rowan, C. Weder, J.R. Capadona. “The Chronic Neuroinflammatory Response to Mechanically-Adaptive Polymer Implants” Biomedical Engineering Society, Seattle, WA, 2013.
13. **K.A. Potter**, A.C. Buck, M.E. Callanan, S. Sunil, W.K. Self and J.R. Capadona. “Suppression of Reactive Oxygen Species by Resveratrol Promotes Neuroprotection at the Cortical-Tissue Device Interface”. Biomedical Engineering Society, Atlanta, GA. 2012.
14. **K.A. Potter**, W.K. Self, A.C. Buck and J.R. Capadona. “Modulation of Neural Degeneration at the Cortical Tissue-Device Interface through Molecular Control of the Inflammatory Response”. Biomedical Engineering Society. Hartford, CT. 2011.

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### **POSTER PRESENTATIONS (SELF)**

1. **K.A. Potter-Baker**, D.P. Janini, N.M. Varnerin, Y.-L. Lin, D.A. Cunningham, V. Sankarasubramanian, K.E. Sakaie, F.S. Frost and E.B. Plow, American Society of Neurorehabilitation, San Diego, CA. 2016.
2. **K.A. Potter-Baker**, D.P. Janini, F.S. Frost, and E.B. Plow, Academy of Spinal Cord Injury Professionals, New Orleans, LA. 2015.
3. **K.A. Potter-Baker**, N.M. Varnerin, D.A. Cunningham, S.M. Roelle, V. Sankarasubramanian, A. Machado, A.B. Conforto, K. Sakaie and E.B. Plow, Society for Neuroscience, Washington, D.C., November 2014.
4. **K.A. Potter**, A.C. Buck, W.K. Self, M.E. Callanan, S. Sunil and J.R. Capadona, Biomaterials and Tissue Engineering Gordon Research Conference, Holderness, July 2013.
5. **K.A. Potter**, A.C. Buck, W.K. Self, M.E. Callanan, S. Sunil and J.R. Capadona, Biomedical Graduate Student Symposium, Cleveland, OH, April 2013.
6. **K.A. Potter**, A.C. Buck, W.K. Self, M.E. Callanan, S. Sunil and J.R. Capadona, Research ShowCASE, Cleveland, OH, April 2013.
7. **K.A. Potter**, A.C. Buck, M.E. Callanan and J.R. Capadona. Society for Biomaterials, New Orleans, LA, October 2012.
8. **K.A. Potter**, A.C. Buck, W.K. Self and J.R. Capadona. Neural Interfaces Conference, Salt Lake City, UT, June 2012.
9. **K.A. Potter**, S. Sunil, W.K. Self, M.E. Callanan and J.R. Capadona. International Conference on Materials, Energy and Environment, Toledo, OH, May 2012.
10. **K.A. Potter**, A.C. Buck, W.K. Self and J.R. Capadona. Graduate Student Research Symposium, Cleveland, OH, April 2012.
11. **K.A. Potter** and J.R. Capadona. Department of Veteran’s Affairs Research Week, Cleveland, OH, April 2011.
12. **K.A. Potter** and J.R. Capadona. Research ShowCASE, Cleveland, OH, April 2010.
13. **K.A. Potter** and J.R. Capadona. Department of Veteran’s Affairs Research Week, Cleveland, OH, April 2010.
14. **K.A. Potter**, C.M. Okoye and J.R. Capadona. Department of Biomedical Engineering 40<sup>th</sup> Anniversary Symposium, Case Western Reserve University, September 2009.

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### **STUDENT MENTORING**

1. Juan Torres, Undergraduate, Department of Health and Biomedical Sciences, UTRGV, November 2018 – Present
2. Alyssa Canales, Undergraduate, Department of Health and Biomedical Sciences, UTRGV, November 2018 – Present
3. Zaida Carballo, Undergraduate, Department of Health and Biomedical Sciences, UTRGV, November 2018 – Present
4. Luis Trevino, Undergraduate, Department of Health and Biomedical Sciences, UTRGV, November 2018 – Present
5. Tanya Llanas, Undergraduate, Department of Health and Biomedical Sciences, UTRGV, November 2018 – Present
6. Lexus, Abrego, Undergraduate, Department of Health and Biomedical Sciences, UTRGV, November 2018 – Present
7. Bryana Baginski, Undergraduate, Department of Biomedical Engineering, CCF, May 2016 – August 2016
8. Nishant Uppal, Undergraduate, Department of Biomedical Engineering, CCF, May 2016 – December 2016
9. Natasha Mohanty, Undergraduate, Department of Biomedical Engineering, CCF, May 2015 – May 2016
10. Shounak Base, Undergraduate, Department of Biomedical Engineering, CCF, September 2015 – December 2015
11. Jacqueline Cavendish, Undergraduate, Department of Biochemistry, CCF, August 2015 – June 2017

12. Emily Serfling, Undergraduate, Department of Biomedical Engineering, CCF, May 2015 – May 2016
13. Brin Bedwell, Undergraduate, Department of Biomedical Engineering, CCF, May 2015 – September 2015
14. Daniel Janini, Undergraduate, Department of Biology, CCF, July 2014 – May 2015
15. Priya Srivastava, Undergraduate, Department of Biomedical Engineering, CWRU, February 2014 – April 2014
16. William Tomaszewski, Undergraduate, Department of Biomedical Engineering, CWRU, Feb 2014 – April 2014
17. Frankie Wong, Undergraduate, Department of Biomedical Engineering, CWRU, February 2014 – April 2014
18. Martin Gitomer, Undergraduate, Department of Biomedical Engineering, CWRU, August 2013 – April 2014
19. William Meador, Undergraduate, Department of Biomedical Engineering, CWRU, August 2013 – April 2014
20. Wade G. Stewart, Undergraduate, Department of Biomedical Engineering, CWRU, June 2013 – April 2014
21. Tyler Srail, Undergraduate, Department of Biomedical Engineering, CWRU, May 2013 – April 2014
22. Aarathi Sehadevan, High School Student, Hathaway Brown, February 2013 – April 2014
23. Shruti Sudhakar, Undergraduate, Department of Biomedical Engineering, CWRU, September 2012 – April 2014
24. Smrithi Sunil, Undergraduate, Department of Biomedical Engineering, CWRU, February 2012 – April 2014
25. Jake Anna, Undergraduate, Department of Biomedical Engineering, CWRU, January 2013 – May 2013
26. Kyle T. Householder, Undergraduate, Department of Biomedical Engineering, CWRU, January 2012 – June 2013
27. Megan E. Callanan, High School Student, Hathaway Brown, August 2011 – April 2014
28. Amy C. Buck, Undergraduate, Department of Biomedical Engineering, CWRU, January 2011 – June 2013
29. Wade K. Self, Undergraduate, Department of Biomedical Engineering, CWRU, September 2010 – December 2011
30. Bharath Velagapudi, Undergraduate, Department of Biomedical Engineering, CWRU, June 2010 – May 2012
31. Robert Jiang, Undergraduate, Department of Biomedical Engineering, CWRU, November 2009 – December 2010
32. Chiderah M. Okoye, Undergraduate, Department of Biomedical Engineering, CWRU, June 2009 – May 2010

***Student Mentored Presentations and Posters:***

1. B. Baginski, N. Varnerin, D. Cunningham, **K.A. Potter-Baker**, J. Cardenas, V. Sankarasubramanian and E.B. Plow “Mirror Movements In Chronic Stroke: Origins And Their Influence On Interpretation About Recovery” Biomedical Engineering Society, Minneapolis, MN, October 2016.
2. A. Buck, **K.A. Potter**, W. Self, M. Callanan, S. Sunil, J.R. Capadona “Resveratrol Reduces Neurodegeneration and BBB Instability Around Intracortical Microelectrodes” Biomedical Engineering Society, Seattle, WA, September 2013.
3. K.T. Householder, **K.A. Potter**, M. Jorfi, C. Weder and J.R. Capadona. “Anti-oxidant Releasing Mechanically-Adaptive Materials Improve Neural Device Tissue Integration” Biomedical Engineering Society, Atlanta, GA, October 2012. (podium)
4. K. Householder, **K.A. Potter**, and J.R. Capadona. “Drug Delivery of Ginger Derived Antioxidants from Mechanically Adaptive Intracortical Implants to Improve Neural Device Tissue Integration” PiNO 2012, Cleveland, OH, June 2012.
5. A.C. Buck, **K.A. Potter**, and J.R. Capadona. “Surface Immobilized Anti-Inflammatory Peptides To Enhance Device-Tissue Integration” Biomedical Engineering Society, Atlanta, GA, October 2012.
6. R. Jiang, **K.A. Potter**, M. Ravikumar, J.P. Harris, J.R. Capadona. “Resveratrol-Infused Biomaterials to Minimize Neurodegeneration” Support for Undergraduate Research and Creative Endeavors (SOURCE) Symposium, Cleveland, OH, December 2010.