

## Curriculum Vitae

Graduate Research Assistant  
J. Crayton Pruitt Family Department of Biomedical Engineering  
University of Florida  
363 NEB  
1064 Center Drive  
Gainesville, FL 32611  
Electronic mail: ls.dewberry@ufl.edu

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### Education

2017-current Ph.D., Biomedical Engineering, University of Florida, Gainesville, FL  
2012-2016 B.S., Biomedical Engineering, University of Alabama at Birmingham, Birmingham AL

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### Positions

2017 - current Graduate Research Assistant, Dept. of Biomedical Engineering, University of Florida, Gainesville, FL  
2016 - 2017 Associate Scientist, GeneCapture, Inc., Huntsville, AL  
2014 - 2016 Undergraduate Research Assistant, Dept. of Biomedical Engineering, University of Alabama at Birmingham, Birmingham, AL

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### Highlights

- I am a member of the Neural Prosthesis Research Laboratory and the Orthopaedic Biomedical Engineering Laboratory.
- Secured \$293,000 in fellowships and grants.
- Supervised 4 undergraduate students, 3 of whom have published.
- I've published 4 papers in peer-reviewed journals and have been cited 94 times with an h-index of 3.

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### Honors and Awards

2018-2021 National Science Foundation (NSF) Graduate Research Fellowship  
2019 William H. Sweet Award from the American Academy of Neurosurgeons for the top abstract in pain research by a neurosurgeon trainee or graduate of the last five years (awarded to Dr. Alex Dru, a neurosurgery resident performing a research rotation in Dr. Allen's lab; I was second author)  
2018 Best overall poster Neural Engineering poster session, University of Florida  
2017 Robert C. Pittman Nanoscience Institute for Medical and Engineering Technology (NIMET) Fellow, University of Florida  
2017 Graduate Student Preeminence Award, University of Florida  
2016 Tau Beta Pi Engineering Honor Society

2012	Science and Technology Honors Program
2012-2015	Dean's list
2012	Presidential Recognition scholarship, University of Alabama at Birmingham, Birmingham, AL
2011-2012	National Honor Society

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### Sponsored Research Projects

#### Dewberry LS (PI)

**Active:** DGE-1842473, National Science Foundation Graduate Research Fellowship  
“Bioelectric Modulation of Autonomic Dysregulation and Inflammation in Osteoarthritis Pathogenesis”

05/01/19 - 05/01/22

\$ 102,000(total costs)

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### Publications and Presentations

#### *Publications:*

1. **Dewberry, LS**, AB Dru, M Gravenstine, B Nguyen, J Anderson, S Vaziri, DJ Hoh, KD Allen, KJ Otto. (2020) Partial High Frequency Nerve Block Decreases Neuropathic Signaling Following Chronic Sciatic Nerve Constriction Injury. *Journal of Neural Engineering*. DOI: 10.1088/1741-2552/abbf03
2. O'Keefe LC, Koelle P, McGee Z, **Dewberry LS**, Wright C, Stallings JE, Gates E, Chittur K. Innovations in Worksite Diagnosis of Urinary Tract Infections and the Occupational Health Nurse. *Workplace Health Saf.* 2019 Mar 29;;2165079919834310. PubMed PMID: 30924742.
3. Taylor, J. C., **Dewberry, L. S.**, Totsch, S. K., Yessick, L. R., DeBerry, J. J., Watts, S. A. & Sorge, R. E. (2017). A novel zebrafish-based model of nociception. *Physiology & Behavior*, 174: 83-88.
4. Waite, M. E., Tomkovich, A., Quinn, T. L., Schumann, A. P., **Dewberry, L. S.**, Totsch, S. K., Sorge, R. E. (2015). Efficacy of common analgesics for spontaneous postsurgical pain in rats. *JAALAS*, 54: 420-5

#### *Abstracts:*

5. **Dewberry, LS**, K Allen, KJ Otto. Gait in a Chronic Nerve Constriction Model with Kilohertz Frequency Alternating Current Stimulation. *Biomedical Engineering Society Abstracts*. Online. 2020.
6. AB Dru, **L Dewberry**, K Otto, K Allen, D Hoh, Novel Kilohertz Frequency Neuromodulation For Fiber Selective Blockade Of Sciatic Pain In A Rat Model *Journal Of Neurosurgery* 131 (1). 2019.
7. **Dewberry LS**, A Dru, J Anderson, D Hoh, K Allen, and KJ Otto. Kilohertz Frequency Alternating Current Stimulation for Peripheral Neuropathy Treatment. *Biomedical Engineering Society Abstracts*. Philadelphia, PA. 2019
8. **Dewberry LS**, A Dru, J Anderson, D Hoh, KJ Otto, and K Allen. Kilohertz Electrical Stimulation for Treatment of Peripheral Neuropathy. University of Miami Neural Engineering Day. Miami, FL. 2019
9. Dru, A., **Dewberry, L. S.**, K Allen, and KJ Otto (2018) Fiber-Selective Neuromodulation For Treatment Of Peripheral Neuropathy In A Rat Model. 7th annual Pruitt Research Day. University of Florida, Gainesville, FL.

10. Ross, E., Jones, C. D., **Dewberry, L. S.**, Quinn, T. L. & Sorge, R. E. (2017, April). Inflammasome subset assembly and nociceptive sensitivity in mice. Paper presented at the 2017 UAB Spring Research Expo, Birmingham, AL.
11. Ross, E., Jones, C. D., **Dewberry, L. S.**, Quinn, T. L. & Sorge, R. E. (2017, April). Inflammasome subset assembly and nociceptive sensitivity in mice. Paper presented at the 2017 Ost Research Competition, Birmingham, AL.
12. **Dewberry, L. S.**, Gray, M., Sears, A. (2016, Oct). Concurrent Transcranial Direct Current Stimulation and Monitoring Device. BMES Annual Meeting, Minneapolis, MN.
13. **Dewberry, L. S.**, Gray, M., Sears, A. (2016, May). Integrated Electroencephalography and Transcranial Direct Current Stimulation Device. UAB Expo, Birmingham, AL.
14. **Dewberry, L. S.**, Taylor, J. C., Yessick, L., Totsch, S. K., Watts, S. A., & Sorge R. E. (2016, May). Development and Validation of a Partially Automated Model of Inflammatory Chronic Pain in Zebrafish. Paper presented at the 35th meeting of the American Pain Society, Austin, TX.
15. Tomkovich, A., Schumann, A. P., **Dewberry, L. S.**, Quinn, T. L. & Sorge, R. E. (2014, May). Evaluation of the efficacy of common analgesics for spontaneous postoperative and evoked pain in rats. Paper presented at the 33rd annual meeting of the American Pain Society, Tampa, FL, USA.
16. Jones, C. D., **Dewberry, L. S.**, Quinn, T. L. & Sorge, R. E. (2014, Apr). The role of the inflammasome in acute pain sensitivity. Poster presented at the 25th Ost Undergraduate Research Competition, Birmingham, USA.
17. Schumann, A. P., Tomkovich, A., **Dewberry, L. S.**, Brookins, A., Quinn, T. L., & Sorge, R. E. (2013, July). Comprehensive evaluation of the efficacy of common analgesics for spontaneous pain following surgery. Paper presented at the UAB Summer Research Expo, Birmingham, AL, USA.
18. Brookins, A. J., **Dewberry, L. S.**, & Sorge, R. E. (2013, July). The role of the inflammasome in acute pain sensitivity. Paper presented at the UAB Summer Research Expo, Birmingham, AL, USA.

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### **Technology Transfer**

#### *Provisional Patent Filing:*

1. Peripheral Nerve Modulator and Methods Relating to Peripheral Nerve Modulation. A Dru, KD Allen, K Otto, **LS Dewberry**. 9/7/2018.

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### **Teaching and Mentoring Experience**

2020-current	Mentor for Travis Koenig
2019-2020	Mentor for Brian Ngyuen
2019-2021	Mentor for Maxwell Gravenstine
2018-2019	Mentor for James Anderson
2019	Supervised Teacher Senior Design I
2019	Supervised Teacher Bioinstrumentation lab
2016	Teaching assistant for Science and Technology Honors Project I

2015-2016                      Biomedical Engineering Society Local Chapter Secretary  
2015                                High School Tutor, Woodlawn High School

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**Professional Affiliations**

Evelyn F. & William L. McKnight Brain Institute, the University of Florida  
Nanoscale Institute for Medical and Engineering Technology, University of Florida  
Biomedical Engineering Society (BMES)  
Tau Beta Pi Engineering Honor Society

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**Service**

2020-current	NPRLab undergraduate manager
2019- current	NPRLab hazardous waste manager
2019-current	NPRLab safety manager
2019-current	NPRLab communications manager
2020-current	Referee for Journal of Neural of Engineering
2018-2019	Exhibit guide at Cade museum for creativity and invention
2015-2016	Biomedical Engineering Society Local Chapter Secretary
2015	High School SAT prep Tutor, Woodlawn High School