Tyler W. A. **Bradshaw, PhD**

Department of Neurobiology, Duke University

Durham, NC

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"Know where you've been and where you're going."

Education

Duke University — *Durham, North Carolina*

PhD in Neurobiology — *Fall 2015 - Spring 2021*

- Soderling Laboratory

Unversity of Washington — *Seattle, Washington*

B.S. in Molecular, Cellular and Developmental Biology — *Fall 2010 - Spring 2014*

- Bornfeldt Laboratory

Skills

Data Science	linear models, mixed models, clustering of graphs
Molecular Neuroscience	Cloning, Immunoblotting, Immunostaining, AP-MS, Proximity Proteomics, Spatial Proteomics
Programming	R, Python, Bash, LaTeX
Languages	English

Work Experience

Soderling Laboratory, Department of Cell Biology, Duke University — *Durham, NC*

Research Technician — *May 2014 - May 2016*

- Established use of CRISPR tools in the Soderling lab
- Performed immunoblotting, immunostaining, and cell and tissue culture
- Maintained mouse colony with >30 strains of mice

Honors & Awards

2018-2021 **Ruth L. Kirschstein National Research Service Award**, NIH NRSA 5F31NS113738-03 — *Duke University*

Presentation

Evaluting changes in the synaptic protein architecture in mouse autism disorders — *Neurobiology Retreat*

Poster Presentation — *November 2018*

- Research poster presentation

Seizures and Ube3a synergistically impair a sociability circuit in a mouse model of autism — *Department of Neurobiology, Duke University*

Student Seminar Presentation — *2018*

- Presentation to Duke Neurobiology faculty and students

A Targeted-Proteomics Approach to Interrogate the Synaptopathology Underlying Monogenic Autism Spectrum Disorders — *Neurobiology Retreat, Wrightsville Beach, NC*

Poster Presentation — *2017*

- Presentation to Duke Neurobiology faculty and students

Development of a Targeted-Proteomics Approach to Identify Underlying Mechanisms of Synaptic Pathologies — *The Society for Neuroscience, San Diego, CA*

Poster Presentation — *2017*

- Presentation to Duke Neurobiology faculty and students

Unraveling the Molecular Mechanisms of Inhibitory Synaptic Function in vivo

Cell Biology Retreat, Beaufort, NC

Poster Presentation

2015

- Presentation to Duke Neurobiology faculty and students

Exploring diabetes-derived intestinal changes that promote atherosclerosis

Bornfeldt Laboratory, University of Washington, Seattle WA

Honors Research Manuscript

2014

- Presentation to SOURCE faculty and students

Obesity, Insulin Resistance, and Type 2 Dibetes in Ossabaw Swine

Surgical Outcome Research Center, Seattle WA

Presentation

2013

- Presentation to SOURCE faculty and students

Publications

Courtland *et al.,* (2021)

eLife

Co-first Author

2021

- *Genetic Disruption of WASHC4 Drives Endo-lysosomal Dysfunction and Cognitive-Movement Impairments in Mice and Human.* Jamie Courtland, **Tyler Bradshaw**, Greg Waitt, Erik Soderblom, Tricia Ho, Anna Rajab, Ricardo Vancini, Il Hwan Kim, Scott Soderling. biorxiv

Uezu *et al.,* (2019)

eLife

Co-Author

2019

- *Essential role for InSyn1 in dystroglycan complex integrity and cognitive behaviors in mice.* Akiyoshi Uezu, Erin Hisey, Yoshihiko Kobayashi, Yudong Gao, **Tyler W.A. Bradshaw**, Patrick Devlin, Ramona Rodriguiz, Purushothama Rao Tata, and Scott Soderling. eLife 2019 Dec 12;8:e50712. **doi:** 10.7554/eLife.50712.

Gao *et al.,* (2018)

Neuron

Co-Author

2018

- *Plug-and-Play Protein Modification Using Homology-Independent Universal Genome Engineering.* Yudong Gao, Erin Hisey, **Tyler W.A. Bradshaw**, Eda Erata, Walter E. Brown, Jamie L. Courtland, Akiyoshi Uezu, Yu Xiang, Yarui Diao, and Scott H. Soderling. Neuron 2018 July 1; S0896-6273(19)30523-9. **DOI:** 10.1016/j.neuron.2019.05.047

Uezu *et al.,* (2016)

Science

Co-second Author

2016

- *Identification of an Elaborate Complex Mediating Postsynaptic Inhibition.* Akiyoshi Uezu, Daniel J. Kanak, **Tyler W.A. Bradshaw**, Erik J. Soderblom, Christina M. Catavero, Alain C. Burette, Richard J. Weinberg, and Scott H. Soderling. Science 2016 Sep 9; 353(6304): 1123–1129. **DOI:** 10.1126/science.aag0821