Dominic Skinner

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EDUCATION

Ph.D. Candidate, University of Utah, Salt Lake City, UT (Expected Graduation Fall 2020) **2016-Present**
- Interdepartmental Program in Neuroscience, Laboratory of Dr. Tom Lane, Pathology Department

Bachelor of Science, University of Puget Sound, Tacoma, WA (GPA: 3.60) **2012-2016**
- Major 1: Molecular and Cellular Biology, Neuroscience emphasis
- Major 2: Economics

PROFESSIONAL EXPERIENCE

Graduate Research Assistant, Dr. Tom Lane, University of Utah, Salt Lake City, UT **2016-Present**
- Investigate the role of chemokine signaling in neutrophils and glial cells using pre-clinical mouse models of multiple sclerosis
- Conduct assays of spinal cord demyelination, viral titers, Single Cell RNAseq and flow cytometry of immune cell infiltration, electron microscopy sample preparation and quantification to assess remyelination
- Developed pharmacological trials and genetic manipulations to study chemokine and glial cells signaling *in vivo*
- Trained new members of lab and mentored undergraduate students on independent project development

Research Assistant, Dr. Siddharth Ramakrishnan, University of Puget Sound, Tacoma, WA **2013-2016**
- Investigated the effects of BPA and stress hormones on the development of GnRH neurons in zebrafish
- Used immunofluorescent microscopy and behavioral assays to quantify the effects elevated stress in adolescent zebrafish

Research Assistant, Dr. Kate Sterling, University of Puget Sound, Tacoma, WA **2015-2016**
- Developed research methodology to investigate the effects of oxytocin on financial decision making

Wine Laboratory Assistant, ETS Laboratories, Saint Helena, CA **2012-2014 (Summers)**
- Managed the receiving, organization, and disposal of wine samples
- Assisted with database creation, asset tracking, and instrument setup

PUBLICATIONS

Mangale, V*., Syage, A. R*., Ekiz, H. A*., **Skinner, D. D**., Cheng, Y., … Lane, T. E. (2020) Microglia influence host defense, disease, and repair following murine coronavirus infection of the central nervous system. *Glia. 1– 16. https://doi.org/10.1002/glia.23844* *Authors contributed equally to this work

Skinner, D. D., Lane, T. E. (2019). Review: The Role of CXCR2 in remyelination using preclinical mouse models of multiple sclerosis. (Cover Article). *DNA and Cell Biology*. https://doi.org/10.1089/dna.2019.5182

Marro, B. S*., **Skinner, D. D*.**, Cheng, Y., Grist, J. J., Dickey, L. L., Eckman, E., … Lane, T. E. (2019). Disrupted CXCR2 signaling in oligodendroglia lineage cells enhances myelin repair in a viral model of multiple sclerosis. *Journal of Virology*. https://doi.org/10.1128/JVI.00240-19 *Authors contributed equally to this work

Cheng, Y*., **Skinner, D.D*.,** Lane, T.E*. (2019) Review: Innate Immune Responses and Viral-Induced Neurologic Disease. *J. Clin. Med*. 8, 3. https://doi.org/10.3390/jcm8010003 *Authors contributed equally to this work

Skinner, D., Marro, B. S., & Lane, T. E. (2018). Review: Chemokine CXCL10 and Coronavirus-Induced Neurologic Disease. *Viral Immunology*. https://doi.org/10.1089/vim.2018.0073

Grist, J. J., Marro, B. S., **Skinner, D. D**., Syage, A. R., Worne, C., Doty, D. J., … Lane, T. E. (2018). Induced CNS expression of CXCL1 augments neurologic disease in a murine model of multiple sclerosis via enhanced neutrophil recruitment. *European Journal of Immunology (Cover Article*), 48(7), 1199–1210. https://doi.org/10.1002/eji.201747442

TEACHING EXPERIENCE

Brain Awareness Week Education Volunteer, University of Utah, Salt Lake City, UT **2016-2019**

- Educate the public about the central nervous system and neurological diseases
- Taught basic human and animal neuroanatomy to children and adults using human tissue samples and brain models
- Led modules on microscopy for high school students

Neuroscience Teaching assistant (NRSC 201), University of Puget Sound, Tacoma, WA **2016**

- Collaborated on weekly laboratory exercises including fluorescent staining and Neuron SpikerBox recording modules
- Prepared and setup reagents and modules for the laboratory component of class
- Met with students to develop independent projects

Economics Teaching assistant (ECON 170), University of Puget Sound, Tacoma, WA **2015**

- Assisted with homework questions for Contemporary Economics course
- Led review sessions and met with students to help with test preparation

Assistant Instructor Sci|Art NanoLab Summer Program, UCLA, Los Angeles, CA **2015**

- Setup and assisted with workshops at the California NanoSystems Institute for a 2-week college program for 70 high school seniors.
- Workshops included nanotoxicology, microbial fuel cells, DIY microscopy

LEADERSHIP EXPERIENCE

ACTRIMS Young Scientist Summit, Americas Committee for Treatment and Research in MS **2019-Present**

- Selected to attend the annual Young Scientist Summit for treatment of Multiple Sclerosis and discuss current and future of treatments with leading researchers and clinicians in the MS field

Co-Chair of Recruitment Committee, U of U Neuroscience Program **2018-2019**

- Organize the yearly recruiting effort for the Neuroscience Program including coordinating interview schedules, ski trip, and host student responsibilities

Graduate Student Representative of the Intermountain Chapter, Society for Neuroscience **2017-2019**

- Organize the SFN sponsored poster session for undergraduate, graduate students and post-docs at the annual University of Utah Neuroscience Program Snowbird Conference
- Judge undergraduate poster session

Organizer of Translational Neuroscience Social Hour, U of U Neurology Department **2017-2019**

- Organize a monthly meeting where researchers and clinicians present their current findings to foster collaboration in the translational neuroscience community

ORAL PRESENTATIONS

Skinner, D., *Remyelination in a Viral Model of Multiple Sclerosis.* 3 Minute Thesis Competition, Salt Lake City, UT. **August 2019**

Skinner, D., *Contribution of Neutrophils to Disease Progression in a Viral Model of Multiple Sclerosis.* Pathology Department Research in Progress, Salt Lake City, UT. **May 2019**

Skinner, D., *Contribution of Neutrophils to Disease Progression in a Viral Model of Multiple Sclerosis.* University of Utah Neuroscience Student Symposium, Salt Lake City, UT. **May 2019**

Skinner, D., *Induced CNS expression of CXCL1 augments neurologic disease in a murine model of multiple sclerosis via enhanced neutrophil recruitment.* FASEB Translational Neuroimmunology Conference. Snowmass, CO. **July 2018**

Skinner, D., *Neutrophil Mechanisms of Action Contribute to Virally Induced Demyelination in a preclinical model of MS.* Department of Neurology Translational Neuroscience Social Hour, Salt Lake City, UT. **January 2018**

POSTER PRESENTATIONS

Skinner, D., Syage, A., Marro, B.S., Stone, C., and Lane, T.E "Neutrophils augment demyelination in a viral model of multiple sclerosis." Cell Symposia: Neuro-Immune Axis. September 22-24, 2019. Long Beach, CA.

Skinner, D., Marro, B.S., Cheng, Y.; Grist, J.J., Dickey, L.L., Eckman, E., Worne, C., Liu, L., Ransohoff, R.M., and Lane, T.E "Disrupted CXCR2 signaling in oligodendroglia lineage cells enhances myelin repair in a viral model of multiple sclerosis." ACTRIMS 2019 Forum. February 28-March 2nd, 2019. Dallas, TX.

Skinner, D., Marro, B.S., Grist, J.J., Dickey, L.L., Eckman, E., Worne, C., Liu, L., Fujinami, R.S., Ransohoff, R.M., and Lane, T.E., "Disrupted CXCR2 signaling in oligodendroglia lineage cells enhances myelin repair in a viral model of multiple sclerosis." Pathology Department Retreat. August 10-11, 2018. Park City, UT.

Skinner, D., Grist, J.J., Marro, B.S., Syage, A., Worne, C., Doty, D.J., Fujinami, R.S., and Lane, T.E., "Induced CNS expression of CXCL1 augments neurologic disease in a murine model of multiple sclerosis via enhanced neutrophil recruitment." FASEB Translational Neuroimmunology. July 8-13, 2018. Snowmass, CO.

Skinner, Dominic and Ramakrishnan, Siddharth. "Cortisol Exposure Affects the Developing GnRH Neural System in Zebrafish." Murdoch 2015 Undergraduate Research Conference. November 5-6, 2015. Vancouver, WA.

Skinner, Dominic and Ramakrishnan, Siddharth. "Effects of Early Cortisol Exposure on the Developing GnRH Neuron System in Zebrafish." Society for Neuroscience 2015 Meeting. October 17-21, 2015. Chicago, IL.

Skinner, Dominic and Ramakrishnan, Siddharth. "Cortisol Exposure Affects the Developing GnRH Neural System in Zebrafish." University of Puget Sound Fall Symposium. September 10, 2015. Tacoma, WA.

Skinner, Dominic and Ramakrishnan, Siddharth. "Bisphenol A Affects Embryonic Catecholamine Release in the Pond Snail Helisoma trivolvis." Phi Sigma Spring Symposium. April 4, 2015. Tacoma, WA.

Skinner, Dominic and Ramakrishnan, Siddharth. "Bisphenol A Affects Embryonic Catecholamine Release in the Pond Snail Helisoma trivolvis." Northwest Developmental Biology Conference. March 18-21, 2015. San Juan Islands (Friday Harbor Labs), WA.

Tetreau, Skyler; **Skinner, Dominic**; Ramakrishnan, Siddharth. "Bisphenol A Affects Early Embryonic Development in the Pond Snail Helisoma trivolvis." Society for Developmental Biology's 73rd Annual Conference. July 17-21, 2014. Seattle (University of Washington), WA.

PROFESSIONAL ACTIVITIES

- **New Ventures Development Fellow, U of U Lassonde Entrepreneur Institute** **2019-Present**
- **Sorenson Impact Fellowship, University of Utah** **2019-Present**
- **Committee Member, U of U Neuroscience Program Seminar Series Committee** **2016-Present**
- **Committee Member, U of U Neuroscience Program Public Relations Committee** **2017-Present**
- **Committee Member, U of U Neuroscience Program Brain Bee Committee** **2016- Present**
- **Member, Society for Neuroscience** **2015**

AWARDS AND SUPPORT

- **Pierre and Claudette McKay Lassonde New Venture Development Scholarship,** University of Utah **2019**
- **FASEB Neuroimmunology Conference Travel Award,** University of Utah **2018**
- **Beverly Pierson Research Engagement Award,** University of Puget Sound **2016**
- **James & Barbara Snow Biology Department Scholarship,** University of Puget Sound **2015**
- **Best Research Poster Award,** University of Puget Sound **2015**
- **Peter K. Wallerich Scholarship,** University of Puget Sound **2015**
- **University Enrichment Committee Student Research Award** University of Puget Sound **2015**
- **Summer NSF Research Grant,** University of Puget Sound **2015**
- **University Enrichment Committee Travel Award,** University of Puget Sound **2015**
- **University Enrichment Committee Travel Award,** University of Puget Sound **2014**

SKILLS: BSL2/ABSL2 (mouse), BSL3/ABSL3, Single Cell RNA-Seq, IHC, FACS, ELISA, PCR, Microscopy, Prism, Python, R,