

ASNB Graduate Student Publications 2018-2022

2018

- **DeVeau KM**, Martin EK, King NT, Shum-Siu A, Keller BB, West CR, Magnuson DSK (2018) Challenging cardiac function post-spinal cord injury with dobutamine. *Auton Neurosci*. 2018 Jan;209:19-24. doi: 10.1016/j.autneu.2016.12.005. Epub 2016 Dec 23.
- **Harman KA, States G**, Wade A, Stepp C, Wainwright G, **DeVeau K**, King N, Shum-Siu A, Magnuson DSK (2018) Temporal analysis of cardiovascular control and function following incomplete T3 and T10 spinal cord injury in rodents. *Physiol Rep*. 2018 Mar;6(6):e13634. doi: 10.14814/phy2.13634.
- **Sokhadze G**, Seabrook TA, Guido W (2018) The absence of retinal input disrupts the development of cholinergic brainstem projections in the mouse dorsal lateral geniculate nucleus. *Neural Dev*. 2018 Dec 12;13(1):27.
- Squair JW, **DeVeau KM, Harman KA**, Poormasjedi-Meibod MS, Hayes B, Liu J, Magnuson DSK, Krassioukov AV, West CR (2018) Spinal Cord Injury Causes Systolic Dysfunction and Cardiomyocyte Atrophy. *J Neurotrauma*. 2018 Feb 1;35(3):424-434.
- **Zhou N**, Masterson SP, Damron JK, Guido W, Bickford ME (2018) The mouse pulvinar nucleus links the lateral extrastriate cortex, striatum, and amygdala, *Journal of Neuroscience* 38(2):347-362.

2019

- Bankston AN, **Forston MD**, Howard RM, Andres KR, Smith AE, Ohri SS, Bates ML, Bunge MB, Whittemore SR (2019) Autophagy is essential for oligodendrocyte differentiation, survival, and proper myelination. *Glia*. 2019 Sep;67(9):1745-1759.
- **Charalambakis NE**, Govindaiah G, **Campbell PW**, Guido W (2019) Developmental Remodeling of Thalamic Interneurons Requires Retinal Signaling. *J Neurosci*. 2019 May 15;39(20):3856-3866.
- Chariker JH, Gomes C, Brabazon F, **Harman KA**, Ohri SS, Magnuson DSK, Whittemore SR, Petruska JC, Rouchka EC (2019) Transcriptome of dorsal root ganglia caudal to a spinal cord injury with modulated behavioral activity. *Sci Data*. 2019 Jun 7;6(1):83. doi: 10.1038/s41597-019-0088-4.
- Chariker JH, Ohri SS, Gomes C, Brabazon F, **Harman KA, DeVeau KM**, Magnuson DSK, Hetman M, Petruska JC, Whittemore SR, Rouchka EC. Activity/exercise-induced changes in the liver transcriptome after chronic spinal cord injury. *Sci Data*. 2019 Jun 13;6(1):88.
- Dwenger M, Kowalski WJ, Ye F, Yuan F, Tinney JP, Setozaki S, Nakane T, Masumoto H, **Campbell P**, Guido W, Keller BB (2019) Chronic optical pacing conditioning of h-iPSC engineered cardiac tissues. *J Tissue Eng*. 2019 Apr 17;10:2041731419841748.
- **Fredericksen KE, McQueen KA**, Samuelsen CL (2019) Experience-dependent c-Fos expression in the mediodorsal thalamus varies with chemosensory modality. *Chem Senses* 44(1):41-49.
- **Gumbel JH, Steadman CJ**, Hoey RF, Armstrong JE, Fell JD, Yang CB, Montgomery LR, Hubscher CH (2019). Activity-based Training on a Treadmill with Spinal Cord Injured Wistar Rats. *J. Vis. Exp.*, Jan 16;(143).
- Keller AV, Hainline C, Rees K, **Krupp S**, Prince D, Wood BD, Shum-Siu A, Burke DA, Petruska JC, Magnuson DSK. Nociceptor-dependent locomotor dysfunction after clinically-modeled hindlimb muscle stretching in adult rats with spinal cord injury. *Exp Neurol*. 2019 Aug; 318:267-276. doi: 10.1016/j.expneurol.2019.03.006. Epub 2019 Mar 14.
- Masterson SP, **Zhou N**, Akers B, Dang W, Bickford ME (2019) Optogenetic and ultrastructural investigation of corticotectal synapses in the mouse. *Journal of Comparative Neurology* 527(4):833-842.
- **Rios-Pilier J**, Krimm RF (2019). TrkB expression and dependence divides gustatory neurons into three subpopulations. *Neural Development*, 14(1):3.
- **Sokhadze G, Campbell PW**, Guido W (2019) Postnatal development of cholinergic input to the thalamic reticular nucleus of the mouse. *Eur J Neurosci*. 2019 Apr;49(8):978-989.
- **Steadman CJ**, Vangoor SS, Hubscher CH (2019) Telemetric monitoring of penile pressure during mating in rats after chronic spinal cord injury. *AJP-Reg Int Comp Physiol.*, Nov 1;317(5): R673-R683.
- **Steadman CJ**, Hoey RF, Montgomery LR, Hubscher CH (2019) Locomotor training alters penile reflex responses in a rat model of spinal cord injury. *J Sex Med* Aug;16(8):1143-1154.

2020

- **Bartonjo J**, Lundy RF (2020) Distinct Populations of Amygdala Somatostatin-Expressing Neurons Project to the Nucleus of the Solitary Tract and Parabrachial Nucleus. *Chemical Senses* 45(8):687-698
- **Campbell PW**, Govindaiah G, Masterson SP, Bickford ME, Guido W (2020) Synaptic properties of the feedback connections from the thalamic reticular nucleus to the dorsal lateral geniculate nucleus. *J. Neurophysiology* 124:404-417.
- Chariker JH, **Sharp M**, Saraswat Ohri S, Gomes C, Brabazon F, Harman KA, Whittemore SR, Petruska JC, Magnuson DSK; Rouchka EC (2020) RNA-seq data of soleus muscle tissue after spinal cord injury under conditions of inactivity and applied exercise. *Data in Brief*. 28:105056. eCollection 2020 Feb.
- Frantz MG, **Crouse EC**, **Sokhadze G**, Ikrar T, Stephany CÉ, Nguyen C, Xu X, McGee AW (2020) Layer 4 Gates Plasticity in Visual Cortex Independent of a Canonical Microcircuit. *Curr Biol*. 2020 Aug 3;30(15):2962-2973.e5. doi: 10.1016/j.cub.2020.05.067.
- Govindaiah G, **Campbell PW**, Guido W (2020) Differential Distribution of Ca²⁺ Channel Subtypes at Retinofugal Synapses. *eNeuro*. 2020 Nov 5;7(6):ENEURO.0293-20.2020.
- **Gumbel JH**, Montgomery LR, Yang C, Hubscher CH (2020) Activity-based training reverses SCI-induced changes in kidney receptor densities and membrane proteins. *J Neurotrauma*, Feb 1;37(3):555-563.
- Hasan N, Pangen G, Ray TA, Fransen KM, **Noel J**, Borghuis BG, McCall MA, Gregg RG. LRIT3 is Required for Nyctalopin Expression and Normal ON and OFF Pathway Signaling in the Retina. *eNeuro*. 2020 Feb 11;7(1):ENEURO.0002-20.2020.
- **McQueen KA**, **Fredericksen KE**, Samuelsen CL (2020) Experience informs consummatory choices for congruent and incongruent odor-taste mixtures in rats. *Chem Senses* 45(5):371-382.
- **Pocratsky AM**, **Shepard CT**, Morehouse JR, Burke DA, Riegler AS, Hardin JT, Beare JE, Hainline C, **States GJ**, **Brown BL**, Whittemore SR, Magnuson DS (2020) Long ascending propriospinal neurons provide flexible, context-specific control of interlimb coordination. *Elife* 9;9:e53565.
- Su J, **Charalambakis NE**, Sabbagh U, Somaiya RD, Monavarfeshani A, Guido W, Fox MA (2020) Retinal inputs signal astrocytes to recruit interneurons into visual thalamus. *Proc Natl Acad Sci U S A*. 2020 Feb 4;117(5):2671-2682.
- **Whyland, KL**, Slusarczyk AS, Bickford ME (2020) GABAergic cell types in the superficial layers of the mouse superior colliculus. *Journal of Comparative Neurology* 528:308-320.

2021

- **Boone HC**, Samonds JM, **Crouse EC**, Barr C, Priebe NJ, McGee AW (2021) Natural binocular depth discrimination behavior in mice explained by visual cortical activity. *Curr Biol*. 2021 May 24;31(10):2191-2198.e3.
- **Brown BL**, Zalla RM, **Shepard CT**, Howard RM, Kopechek JA, Magnuson DSK, Whittemore SR (2021) Dual-Viral Transduction Utilizing Highly Efficient Retrograde Lentivirus Improves Labeling of Long Propriospinal Neurons. *Front Neuroanat*. 15:635921.
- **Gumbel JH**, Yang CB, Hubscher CH (2021) Timeline of Changes in Biomarkers Associated with Spinal Cord Injury-Induced Polyuria. *Neurotrauma Rep*. 2021 Oct 27;2(1):462-475
- Huang T, **Ohman LC**, Clements AV, **Whiddon ZD**, Krimm RF (2021) Variable Branching Characteristics of Peripheral Taste Neurons Indicates Differential Convergence. *J Neurosci*. 2021 Jun 2;41(22):4850-4866.
- Lucci VM, Harrison EL, **DeVeau KM**, **Harman KA**, Squair JW, Krassioukov A, Magnuson DSK, West CR, Claydon VE (2021) Markers of susceptibility to cardiac arrhythmia in experimental spinal cord injury and the impact of sympathetic stimulation and exercise training. *Auton Neurosci*. 2021 Nov;235:102867.
- **Ohman LC**, Krimm RF (2021) Variation in taste ganglion neuron morphology: insights into taste function and plasticity. *Curr Opin Physiol*. 2021 Apr; 20:134-139.
- **Ohman LC**, Krimm RF (2021) Whole-Mount Staining, Visualization, and Analysis of Fungiform, Circumvallate, and Palate Taste Buds. *J Vis Exp*. 2021 Feb 11;(168):10.3791/62126.
- Saraswat Ohri S, Howard RM, Liu Y, Andres KR, **Shepard CT**, Hetman M, Whittemore SR (2021) Oligodendrocyte-specific deletion of Xbp1 exacerbates the endoplasmic reticulum stress response and restricts locomotor recovery after thoracic spinal cord injury. *Glia*. 2021 Feb;69(2):424-435. doi: 10.1002/glia.23907.

- **Shepard CT, Pocratsky AM, Brown BL**, Van Rijswijck MA, Zalla RM, Burke DA, Morehouse JR, Riegler AS, Whittemore SR, Magnuson DS (2021) Silencing long ascending propriospinal neurons after spinal cord injury improves hindlimb stepping in the adult rat. *Elife*. 2021 Dec 2;10:e70058.
- **Steadman CJ**, Vangoor SS, Hubscher CH (2021) Kinematic analysis of penile reflexes in a rat model of spinal cord injury. *Asian J Androl*. 2021 Jan-Feb;23(1):30-35.

2022

- **Bartonjo J**, Masterson S, St John SJ, Lundy R (2022) Perturbation of amygdala/somatostatin-nucleus of the solitary tract projections reduces sensitivity to quinine in a brief-access test. *Brain Res*. 2022 May 15;1783:147838.
- **Bartonjo JJ**, Lundy RF (2022) Target-specific projections of amygdala somatostatin-expressing neurons to the hypothalamus and brainstem. *Chem Senses*. 2022 Jan 1;47:bjac009.
- **DePiero VJ**, Borghuis BG (2022) Phase advancing is a common property of multiple neuron classes in the mouse retina. *eNeuro*. 2022 Sep-Oct; 9(5): ENEURO.0270-22.2022.
- **Fredericksen KE**, Samuelsen CL. Neural representation of intraoral olfactory and gustatory signals by the mediodorsal thalamus in alert rats. *J. Neurosci*. 2022; 42 (43) 8136-8153.
- **Gumbel JH**, Hubscher CH (2022) Effect of T3 Spinal Contusion Injury on Upper Urinary Tract Function. *Neurotrauma Rep*. 2022 Apr 26;3(1):190-198.
- Hubscher CH, **Gumbel JH**, Armstrong JE, Montgomery LR (2022) Impact of activity-based recovery training and desmopressin on spinal cord injury-induced polyuria in Wistar rats. *J Spinal Cord Med*. 2022 May 23:1-7.
- **Orem BC**, Morehouse JR, Ames S, Burke DA, Magnuson DSK, Stirling DP (2022) Direct Ryanodine Receptor-2 Knockout in Primary Afferent Fibers Modestly Affects Neurological Recovery after Contusive Spinal Cord Injury. *Neurotrauma Rep*. 2022 Oct 6;3(1):433-446.
- Saraswat Ohri S, Andres K, Howard RM, **Brown BL**, **Forston MD**, Hetman M, Whittemore SR (2022) Acute pharmacological inhibition of PERK signaling after spinal cord injury spares oligodendrocytes and improves locomotor recovery. *J. Neurotrauma* 2022 Dec 11.
- **Sokhadze G**, **Campbell PW**, **Charalambakis N**, Govindaiah G, Guido W, McGee AW (2022) Cre driver mouse lines for thalamocortical circuit mapping. *J Comp Neurol*. 2022 May;530(7):1049-1063.
- **Sokhadze G**, **Whyland KL**, Bickford ME, Guido W (2022) The organization of cholinergic projections in the visual thalamus of the mouse. *J Comp Neurol*. 2022 May;530(7):1081-1098.
- **States GJR**, Keller A, Shum-Siu A, Petruska JC, Magnuson DSK (2022) Broad opioid antagonism amplifies disruption of locomotor function following therapy-like hindlimb stretching in spinal cord injured rats. *Spinal Cord*. 2022 Apr;60(4):312-319.
- Whittemore SR, Saraswat Ohri S, **Forston MD**, Wei GZ, Hetman M (2020) The Proteostasis Network: A Global Therapeutic Target for Neuroprotection after Spinal Cord Injury. *Cells* 11(21):3339.
- **Whyland KL**, Hernandez Y, Slusarczyk AS, Guido W, Bickford ME. The parabigeminal nucleus is a source of "retinogeniculate replacement terminals" in mice that lack retinofugal input. *J Comp Neurol*. 2022 Dec;530(18):3179-3192.