

## **Michael D. Burton, Ph.D.**

Assistant Professor of Neuroscience  
Neuroimmunology and Behavior Research Group  
Center for Advanced Pain Studies  
Center for Vital Longevity-affiliate  
School of Behavioral and Brain Sciences

**OFFICE:** University of Texas at Dallas  
800 W. Campbell Rd. Richardson, TX 75080. BSB 10.546

**PHONE:** (972) 883-7273

**E-MAIL:** [michael.burton@utdallas.edu](mailto:michael.burton@utdallas.edu)

### **EDUCATION**

- 2007-2012 **Doctor of Philosophy** – Animal Science, Immunophysiology and Behavior,  
Laboratory of Integrative Immunology and Behavior  
University of Illinois, Urbana–Champaign, IL  
Rodney W. Johnson, Ph.D. - advisor
- 2006-2007 **Masters Candidate** – Biological Science  
Laboratory of Developmental Neurobiology and Electrophysiology  
University of Missouri, Columbia, Mo  
Andrew McClellan, Ph.D. – rotation advisor
- 2002-2006 **Bachelor of Science**, Animal Science, Biotechnology, Business and Industry  
Curriculum, Chemistry Minor  
University of Illinois, Urbana-Champaign, IL  
Rex Hess, Ph.D. - advisor

### **RESEARCH POSITIONS**

**Assistant Professor**, University of Texas at Dallas, Richardson TX **2017-**  
Laboratory of Neuroimmunology and Behavior: Behavioral and Brain Sciences

- Investigate the impact/interface of immune cell and peripheral sensory neurons on pain in various pain models and neuroinflammation in a mouse model.
- Project researching the effects of cell-specific TLR-4 signaling on neuropathic pain, inflammatory pain, and metabolic stress.
- Maintain transgenic mouse colony.
- Mentor several undergraduate, graduate, and young postdoctoral researchers.
- Awarded a NIH transition to independence award (K-award) (NINDS).

- Awarded a startup and Rising STARS funding (UT System).

**Postdoctoral Research Associate, University of Texas at Dallas, Richardson TX 2015-2017**

Pain Neurobiology Research Group: Ted Price, Ph.D. – co-advisor

- Investigate the impact/interface of immune cell and peripheral sensory neurons on pain in various pain models and neuroinflammation in a mouse model.
- Lead project researching the effects of cell-specific TLR4 signaling on neuropathic pain, inflammatory pain, and metabolic stress.
- Maintain and upkeep of transgenic mouse colony.
- Honed skills in genetic, metabolism, and pain research.
- Awarded a NIH transition to independence award (K-award) (NINDS).

**Postdoctoral Research Fellow, UT Southwestern Medical Center, Dallas TX 2012-2015**

Division of Hypothalamic Research: Joel K. Elmquist, D.V.M., Ph.D. – co-advisor

- Investigated the impact of peripheral sensory neuron signaling on diet-induced obesity and other insults on neuroinflammation and feeding in a mouse model.
- Lead project researching the effects of TLR4 signaling on fatty acid-induced obesity, energy expenditure, and glucose homeostasis.
- Engineered transgenic animals and maintained transgenic mouse colony.
- Honed skills in metabolic, glucose homeostasis, and obesity research.
- Shared research findings at “works-in-progress” meetings.
- Authored multiple peer-reviewed publications.
- Acquired federal (NIH) funding (NIH supplement).

**Graduate Research Assistant, University of Illinois Urbana-Champaign 2008-2012**

Department of Animal Sciences: Rodney W. Johnson, Ph.D. - advisor

- Investigated the effect of the interleukin-6 trans-signaling cascade on LPS-induced deficits in cognition, sickness, and neuroinflammation in the adult and aging mammalian brain using a rodent model.
- Led project researching the effects of diet enriched in the flavonoid luteolin on the brain and behavior of adult and aged animals.
- Developed new assay to isolate microglia from rodent and porcine brain.
- Trained new graduate and undergraduate students.

- Aided in the maintenance and upkeep of laboratory equipment and supplies.
- Brain dissection, tissue/cell Culture, stereotactic surgery (ICV).
- Flow cytometry, western Immunoblotting, ELISA.
- Authored multiple peer-reviewed publications.

**Graduate Research Fellow, University of Missouri-Columbia 2006-2008**

- Worked on a project developing a conditional knock-out of gastrulation homeobox gene 1 (*gbx1*) to investigate the involvement of the gene during neural development.
- Independently executed pharmacological experiments and analyzed all data.
- Established the use of new bioinformatics software (DNASTAR) in the lab.
- Electrophysiology, electromyography, whole-cell recording / patch clamp.
- In-situ hybridization, northern blot, gene sequencing, endonuclease excision.

**Ronald E. McNair Fellow (May-August 2003) / Undergraduate Research Assistant, University of Illinois Urbana-Champaign 2003-2006**

- Investigated the effects of anti-estrogen (ICI 182720) on sperm integrity and its possible use as oral contraception in males.
- Aided in the development of rodent cognitive tasks for studies on neuroinflammation.
- Independently carried out behavioral experiments.
- Collaborated in data collection (tissue dissection, ELISA, and RT-PCR)
- Operated the light microscope and stereological optical dissector.
- Handled laboratory animals.
- Assisted and performed small animal surgeries (ICV).

**RESEARCH INTERESTS**

- Neuroinflammation & Behavior      Pain
- Neuroendocrinology                      Neurochemistry
- Aging    Obesity & Metabolism

**PROFESSIONAL ORGANIZATIONS**

Psychoneuroimmunology Research Society (PNIRS.org) (2008- )

Society for Neuroscience (SfN.org) (2010- )

The Endocrine Society (endocrine.org) (2013- )

American Pain Society (americanpainsociety.org) (2015-2019)

International Association for the Study of Pain (iasp-pain.org) (2016- )

American Society of Cell Biology (ASCB) (2019 - )

United States Association for the Study of Pain (USASP) (usasp.org) (2020-)

## **HONORS AND AWARDS**

Research Corporation for Science Advancement Fellow – Paul Allen Foundation and Cottrell Group – for Scialog: Microbiome, Neurobiology, and Disease (2021)

Annual Biomedical Research Conference for Minority Students (ABRCMS), Ambassador and Judge Travel Award, (2020)

Mitchell Max Award for Pain Research Winner – NIH Pain Consortium (2019)

Annual Biomedical Research Conference for Minority Students (ABRCMS), Ambassador and Judge Travel Award, (2019)

Rita Allen Foundation/American Pain Society Scholars Award (RAF)  
(\$150,000 – awarded to Michael Burton: Novel models to assess sufficiency of single cell paradigms in CB1R-analgesia) (2019-2022)

Accomplishing Career Transitions (ACT) Fellow  
American Society for Cell Biology (ASCB), 2019-2021

Annual Biomedical Research Conference for Minority Students (ABRCMS), Judge Travel Award, (2018)

NINDS Mentoring Institute for Neuroscience Diversity Scholars (MINDS) Fellow  
NIH-NINDS-SFN, (2018-2019)

HHMI-NIH Peer Review Process Workshop,  
Howard Hughes Medical Institute & NIH Center for Scientific Review, (2018)

Future Leaders in Pain Research Grant  
American Pain Society, (\$25,000 – awarded to Michael Burton: Uncovering cell-specific mechanisms in sex differences in TLR4-dependent Pain), (2017-2019)

Keystone Symposia Fellow  
Keystone Symposia on Molecular and Cellular Biology, (2017-2018)

Young Investigator Travel Award

American Pain Society, (2017)

NINDS Advanced Postdoctoral Career Transition Award to Promote Diversity in Neuroscience Research (\$869,215 – awarded to Michael Burton K22NS096030-01: The Role of Cell-specific TLR-4 Signaling in Developing Chronic Pain) (2016-2021)

Young Investigator Travel Award  
American Pain Society, (2016)

Future Leaders Advancing Research in Endocrinology Internship  
Endocrine Research Society, (2015-2016)

Future Leaders Advancing Research in Endocrinology Fellowship  
Endocrine Research Society, (2014-2015)

NIDDK Research Supplement to Promote Diversity in Health-Related Research for support of graduate research (\$85,701 - award is a supplement to J.K. Elmquist/Phillip Scherer P01-DK-088761: Novel Mechanisms Regulating the Adipocyte-Brain Hepatocyte Axis) (2013-2015)

PNIRS Trainee Travel Award  
Psychoneuroimmunology Research Society, Chicago (2011)

Gamma Sigma Delta, Honor Society of Agriculture  
University of Illinois, Urbana-Champaign (2010- )

National Institutes of Aging Grants Technical Assistance Workshop  
NIA, Atlanta, GA (2009)

NIA Research Supplement to Promote Diversity in Health-Related Research for support of graduate research (\$77,157 - award is a supplement to R.W. Johnson R01-AG-61710: Neuroinflammation and Behavior in the Aged) (2009-2012)

Life Sciences Fellowship  
University of Missouri, Columbia, Mo (2006-2008)

Office of Minority Student Affairs TRIO/EOP Achiever's Award  
University of Illinois, Urbana-Champaign (2006)

Ronald E. McNair Scholar  
University of Illinois, Urbana-Champaign (2005)

**PEER REVIEWED PUBLICATIONS****+UNDERGRADUATE OR MASTERS CANDIDATE AUTHOR = 35 INSTANCES IN 42 MANUSCRIPTS**

1. Tierney, J.A.<sup>+</sup>, Jeong, H.S.<sup>+</sup>, Szabo-Pardo, T.S., Dussor, G., **Burton, M.D.** Palmitic Acid induces mechanical hypersensitivity via the TLR4 Receptor on nociceptors (*in preparation*)
2. Lenert, M.E., Agalave, N.M., Gomez, R.<sup>+</sup>, Lane, B.T.<sup>+</sup>, Daily, DL, Geasland, K.G., Crofford, L.J., Sluka, K.A., Merriwether, E.N.\*<sup>+</sup>, **Burton, M.D.\*** Back translating clinically relevant pain and functional assays for fibromyalgia to a preclinical model of musculoskeletal pain (*in preparation*) **\*co-corresponding author**
3. Bryan, C.L.<sup>+</sup>, Nottingham, B.N.<sup>+</sup>, Lai, V.<sup>+</sup>, Jia, L, Lee, S., Elmquist, J.K., Gautron, L., **Burton, M.D.** Vagal versus Macrophage TLR4 in sickness and metabolism. (*in preparation*)
4. **Burton, M.D.**, Udit S., Bookout A.L., Lee, S., Lee, C.E., Jia, L., Gautron, L., Elmquist, J.K. The role of sensory neuron toll-like receptor 4 in dietary energy balance. (*in preparation*)
5. Agalave, N.M., Mody, P.H., Szabo-Pardi, T.A., Jeong, H.S.<sup>+</sup>, **Burton, M.D.** Neuroimmune consequences of eIF4E phosphorylation on chemotherapy-induced peripheral neuropathy. *Frontiers in Immunology* (accepted, in press) (March 2021)
6. Szabo-Pardi, T.A., Barron, L.R.<sup>+</sup>, **Burton, M.D.** Sensory Neuron TLR4 mediates the development of nerve-injury induced mechanical hypersensitivity in female mice. *Brain, Behavior, and Immunity* (*accepted, in press*) (March 2021)
7. Lenert, M.E., Chaparro, M.M.<sup>+</sup>, **Burton, M.D.** Homeostatic Regulation of Estrus Cycle of Young Female Mice on Western Diet. *Journal of the Endocrine Society (JES)* (accepted), epub ahead of print online (Januray 2021)  
<https://doi.org/10.1210/jendso/bvab010>
8. Szabo-Pardi, T.A.\*<sup>+</sup>, Syed, U.\*<sup>+</sup>, Castillo, Z.W.<sup>+</sup>, **Burton M.D.** Use of Integrated Optical Clearing and 2-Photon Imaging to Investigate Sex Differences in Neuroimmune Interactions after Peripheral Nerve Injury. *Front. Cell Dev. Biol.* | doi: 10.3389/fcell.2021.624201online ahead of Print Jan 2021. **\*co-first authors**
9. Jia, L., Lee, S., Tierney, J.A.<sup>+</sup>, Elmquist, J.K., **Burton, M.D.\***, Gautron, L.\* TLR4 signaling selectively and directly promotes CGRP release from vagal afferents. *eNeuro* 14 December 2020, ENEURO.0254-20.2020; DOI: <https://doi.org/10.1523/ENEURO.0254-20.2020> **\*co-corresponding author**

10. Mody, P.H., Santos, N.L., Lenert, M.E., Barron, L.R., Nottingham, B.L.<sup>+</sup>, **Burton, M.D.** The role of cap-dependent translation in aged-related changes in neuroimmunity and affective behaviors. *Neurobiology of Aging* 2020 Nov 13;98:173-184. doi: 10.1016/j.neurobiolaging.2020.10.014. Online ahead of print.
11. Grace P.M., Tawfik, V.L., Svensson, C.I., **Burton, M.D.**, Loggia, M.L., Hutchinson, M.R. The Neuroimmunology of Chronic Pain: From Rodents to Humans. *J Neurosci.* 2020 Nov 24;JN-SY-1650-20. doi: 10.1523/JNEUROSCI.1650-20.2020. Online ahead of print.
12. Segarra VA, Primus C, Unguez GA, Edwards A, Etson C, Flores SC, Fry C, Guillory AN, Ingram SL, Lawson M, McGee R, Paxson S, Phelan L, Suggs K, Vega LR, Vuong E, Havran JC, Leon A, **Burton MD**, Lujan JL, Ramirez-Alvarado M. Scientific societies fostering inclusivity through speaker diversity in annual meeting programming: a call to action. *Mol Biol Cell.* 2020 Nov 1;31(23):2495-2501. doi: 10.1091/mbc.E20-06-0381.
13. Merriwether, E.N., Agalave, N.M., Dailey, D.L., Rakel, B.A., Kokler, S.J., Lenert, M.E.<sup>+</sup>, Spagnola, W.H., Lu, Y., Geasland, K.M., Allen, L.A.H., **Burton, M.D.\***, Sluka, K.A.\*. Novel role of IL-5 and monocyte phenotype in fibromyalgia PAIN: September 24, 2020 - Volume Articles in Press - Issue -doi: 10.1097/j.pain.0000000000002089 **\*co-corresponding author**
14. Szabo-Pardi, T.A., Agalave, N.M., **Burton, M.D.** The role of microglia versus peripheral macrophages in maladaptive plasticity after nerve injury. *Neural Regeneration Research.* 2021 Jun;16(6):1202-1203. doi: 10.4103/1673-5374.300438.
15. Rudjito, R., Agalave, N.M., Farinotti, A.B., Lundback, P.L., Szabo-Pardi, T.A.<sup>+</sup>, Price, T.J., Harris, H.E., **Burton, M.D.\***, Svensson, C.I.\* Sex- and cell-dependent role of peripheral HMGB1 and TLR4 in arthritis-induced pain. *PAIN: September 16, 2020 - Volume Articles in Press - Issue -doi: 10.1097/j.pain.0000000000002034 \*co-corresponding author*
16. Agalave, N.M., Rudjito, R., Farinotti, A.B., Khoonsari, P.E., Sandor, K., Nomura, Y., Szabo-Pardi, T.A.<sup>+</sup>, Urbina, C.M., Palada, V., Price, T.J., Harris, H.E., **Burton, M.D.\***, Kultima, K.\*, Svensson, C.I.\* Sex-dependent role of microglia in disulfide HMGB1-mediated mechanical hypersensitivity. *PAIN: August 05, 2020 - Volume Articles in Press - Issue -doi: 10.1097/j.pain.0000000000002033 \*co-senior author*
17. Mody P.H., Dos Santos N.L., Barron L.R.<sup>+</sup>, Price T.J., **Burton M.D.** eIF4E phosphorylation modulates pain and neuroinflammation in the aged. *Geroscience.* 2020 Jul 1. doi: 10.1007/s11357-020-00220-1. Epub ahead of print. PMID: 32613493.

18. Ray P.R., Wangzhou A., Ghneim N., Yousuf M.S., Paige C., Tavares-Ferreira D., Mwirigi J.M., Shiers S., Sankaranarayanan I., McFarland A.J., Neerukonda S.V., Davidson S., Dussor G., **Burton M.D.\***, Price T.J.\* A pharmacological interactome between COVID-19 patient samples and human sensory neurons reveals potential drivers of neurogenic pulmonary dysfunction. *Brain Behav Immun.* 2020 Jun 1:S0889-1591(20)30670-X. doi: 10.1016/j.bbi.2020.05.078. Epub ahead of print. PMID: 32497778; PMCID: PMC7263237. *\*co-corresponding author*
19. Hassler S.N., Kume M., Mwirigi J.M., Ahmad A.<sup>+</sup>, Shiers S., Wangzhou A., Ray P.R., Belugin S.N., Naik D.K., **Burton M.D.**, Vagner J., Boitano S., Akopian A.N., Dussor G., Price T.J. The cellular basis of protease-activated receptor 2-evoked mechanical and affective pain. *JCI Insight.* 2020 Jun 4;5(11):e137393. doi: 10.1172/jci.insight.137393. PMID: 32352932; PMCID: PMC7308051.
20. Agalave, N.M., Lane, B.T.<sup>+</sup>, Mody, P.H., Szabo-Pardi, T.A., **Burton, M.D.** Isolation, culture, and downstream characterization of primary microglia and astrocytes from adult rodent brain and spinal cord. *Journal of Neuroscience Methods*, 2020 April. Epub ahead of print. Doi: 10.1016/j.jneumeth.2020.108742
21. Ruhl CR, Pasko BL, Khan HS, Kindt LM, Stamm CE, Franco LH, Hsia CC, Zhou M, Davis CR, Qin T, Gautron L, **Burton MD**, Mejia GL, Naik DK, Dussor G, Price TJ, Shiloh MU. Mycobacterium tuberculosis Sulfolipid-1 Activates Nociceptive Neurons and Induces Cough. *Cell.* 2020 Apr 16; 181 (2): 293-305.e11. doi:10.1016 /j.cell.2020.02.026
22. Milligan, A.L.<sup>+</sup>, Szabo-Pardi, T.A., **Burton, M.D.** Cannabinoid Receptor type 1 and its role as an analgesic: An opioid alternative? *Journal of Dual Diagnosis.* 2020 Jan-Mar;16(1) 106-119. doi:10.1080/15504263.2019.1668100.
23. Inyang, K.E., **Burton, M.D.**, Szabo-Pardi, T.A.<sup>+</sup>, Wentworth, E.<sup>+</sup>, McDougal, T.A.<sup>+</sup>, Ramirez, E.D.<sup>+</sup>, Pradhan, G., Dussor, G., Price, T.J. Indirect AMPK activators prevent incision-induced hyperalgesia and block hyperalgesic priming while positive allosteric modulators only block priming in mice. *Journal of Pharmacology and Experimental Therapeutics.* 2019 Oct;371(1):138-150. doi: 10.1124/jpet.119.258400.
24. Sparkman, N.L., Buchanan, J.B., Dos Santos, N.L., Johnson, R.W., **Burton, M.D.** Aging sensitizes male mice to cognitive dysfunction induced by central HIV-1 gp120. *Experimental Gerontology.* 2019 Oct 15;126:110694.



25. Mercado, L.L., Caron, A., Wang, Y., **Burton, M.D.**, Gautron, L. Identification of leptin receptor-expressing cells in the mouse nodose ganglion. *Endocrinology*. 2019 May 1;160(5):1307-1322.
26. Avona, A.D., Burgos-Vega, C., **Burton, M.D.**, Akopian, A., Price, T.J., Dussor, G. Dural Calcitonin gene-related peptide produces female-specific responses in rodent migraine models. *The Journal of Neuroscience*. 2019 May 29;39(22):4323-4331. doi:10.1523/JNEUROSCI.0364-19.2019.
27. Szabo-Pardi, T.A., Agalave, N.M., Andrew, A.T.<sup>+</sup>, **Burton, M.D.** In vivo two-color 2-photon imaging of genetically-tagged reporter cells in the skin. *Journal of Visualized Experiments (JoVE)* 2019 Jul 11;(149). doi: 10.3791/59647.
28. Garner K.M., Amin R.<sup>+</sup>, Johnson R.W., Scarlett E.J.<sup>+</sup>, **Burton M.D.** Microglia priming by interleukin-6 signaling is enhanced in aged mice. *The Journal of Neuroimmunology*. 2018 Nov 15;324:90-99. doi: 10.1016/j.jneuroim.2018.09.002.
29. Inyang, K.E., Szabo-Pardi, T.<sup>+</sup>, Wentworth, E.<sup>+</sup>, Dussor, G., **Burton M.D.\***, Price, T.J.\* The antidiabetic drug metformin prevents and reverses neuropathic pain and spinal cord microglial activation in male but not female mice. *Pharmacological Research* 2018 Nov 1;139:1-16. doi: 10.1016/j.phrs.2018.10.027. *\*co-corresponding author*
30. Megat S., Ray P.R., Moy J.K., Lou T.F., Barragán-Iglesias P., Li Y., Pradhan G., Wangzhou A., Ahmad A.<sup>+</sup>, **Burton M.D.**, North R.Y., Dougherty P.M., Khoutorsky A., Sonenberg N., Webster K.R., Dussor G., Campbell Z.T., Price T.J.. Nociceptor Translational Profiling Reveals the Ragulator-Rag GTPase Complex as a Critical Generator of Neuropathic Pain. *The Journal of Neuroscience*. 2019 Jan 16;39(3):393-411
31. Moy, J.K., Szabo-Pardi, T.<sup>+</sup>, Tillu, D.V., Megat, S., Pradhan, G., Kume, M., Asiedu, M.N., **Burton, M.D.**, Dussor, G., Price, T.J. Temporal and sex differences in the role of BDNF/TrkB signaling in hyperalgesic priming in mice and rats. *Neurobiology of Pain*. [epub ahead of print October 18 2018].
32. Barragán-Iglesias P., Lou T.F., Bhat V.D., Megat S., **Burton MD**, Price T.J., Campbell Z.T.. Inhibition of Poly(A)-binding protein with a synthetic RNA mimic reduces pain sensitization in mice. *Nature Communications*. 2018 Jan 2;9 (1)

33. Udit, S., **Burton M.D.**, Rutkowski, J.M., Lee, S., Bookout, A.L., Scherer, P.E., Elmquist, J.K., Gautron, L. Nav1.8 neurons are involved in limiting acute phase responses to dietary fat. *Molecular Metabolism*. 2017 Aug 4 (online)
34. **Burton, M.D.**, Tillu, D.V., Mejia, G.L., Mazhar, K.<sup>+</sup>, Asiedu, M.N., Inyang, K., Hughes, T., Lian, B., Dussor, G., Price, T.J. Pharmacological activation of AMPK inhibits incision-evoked mechanical hypersensitivity and the transition to a chronic pain state. *Neuroscience*. 2017 Jul 17
35. Moy, J.K., Khoutorsky, A, Asiedu, M.N., Black, B., Kuhn, J.<sup>+</sup>, Barragan-Iglesias, P., Megat, S., **Burton, M.D.**, Burgos-Vega, C., Melemedjian, O., Boitano, S., Vagner, J., Gkogka, C., Pancaizio, J., Mogil, J., Dussor, G.O., Sonenberg, N., Price, T.J. The MNK - eIF4E signaling axis contributes to injury-induced nociceptive plasticity and the development of chronic pain. *The Journal of Neuroscience* 2017 Aug 2;37(31).
36. **Burton, M.D.**, Rytych, J.L.<sup>+</sup>, Amin, R.<sup>+</sup>, Johnson, R.W. Luteolin ameliorates microglia priming and neuroinflammation in aged mice. *Rejuvenation Research* 2016 Aug;19(4)
37. Elmore, M.R.P., **Burton, M.D.**, Conrad, M.C., Rytych, J.L.<sup>+</sup>, R.W. Johnson. The impact of porcine reproductive and respiratory syndrome virus (PRRSV) on neuroinflammation and cognitive function in neonatal piglets. *The Journal of Neuroscience* 2014 Feb 5;34(6).
38. Gautron L., Rutkowski J.M., **Burton M.D.**, Wei W., Wan Y., Elmquist J.K. Neuronal and nonneuronal cholinergic structures in the mouse gastrointestinal tract and spleen. *Journal of Comparative Neurology*. 2013 Nov;521(16):3741-67.
39. **Burton, M.D.**, Rytych, J.L.<sup>+</sup>, Freund, G.G., Johnson, R.W. Central inhibition of interleukin-6 trans-signaling during peripheral infection reduced neuroinflammation and sickness in aged mice. *Brain Behavior and Immunity* 2013 Jan [Epub ahead of print]. 2013 May;30:66-72.
40. Rytych, J.L.<sup>+</sup>, M.R.P. Elmore, **M.D. Burton**, R.N. Dilger, R.W. Johnson. Early life iron deficiency impairs spatial cognition in neonatal piglets. *Journal of Nutrition* 2012 Nov; 142(11):2050-6.
41. **Burton, M.D.**, Johnson, R.W. Interleukin-6 trans-signaling in the senescent mouse brain is involved in infection-related deficits in contextual fear conditioning. *Brain, Behavior, and Immunity* 2011 Oct. 29. [Epub ahead of print]. 2012 Jul;26(5):732-8.

42. **Burton, M.D.**, Sparkman, N.L., Johnson, R.W. Inhibition of interleukin-6 trans-signaling facilitates recovery from Lipopolysaccharide-induced sickness behavior. *Journal of Neuroinflammation*. 2011 May 19; 8:54.

## **POSTER & PRESENTATIONS**

### **+UNDERGRADUATE OR MASTERS CANDIDATE AUTHOR**

**Burton, M.D. (2021)** *Sex and cell-specific actions of TLR4-induced inflammatory pain* Tulane Brain Institute Seminar Series. **Invited** Speaker, Tulane University. [Oral Presentation]

**Burton, M.D. (2021)** *The interaction of the immune system and nervous system in the development of chronic pain*. Department of Neuroscience Seminar Series. **Invited** Speaker, Michigan State University. [Oral Presentation]

**Burton, M.D. (2020)** *Interconnectivity of the nervous and immune system to mediate pain*. Department of Neuroscience Seminar Series. **Invited** Speaker, University of Florida. [Oral Presentation]

**Burton, M.D. (2020)** *Use of single cell CB1R paradigms to mediate analgesic alternatives*. United States Associate for the Study of Pain (USASP). Inaugural Annual Meeting, **Invited** Speaker, Rita Allen Pain Scholar Session. [Oral Presentation]

**Burton, M.D. (2020)** *Interconnectivity of the nervous and immune system to mediate pain*. Gulf Coast Consortium, PAIN2020, **Invited** Speaker, Houston, TX [Oral Presentation]

**Burton, M.D. (2019)** *Sex and Cell-specific actions of TLR4-induced Pain*. Kansas University Medical Center, **Invited** Speaker, Kansas City, MO [Oral Presentation]

**Burton, M.D. (2019)** *Neuroinflammation and Pain in the Aged*. Texas Tech, Health Science Center, **Invited** Speaker, Lubbock, TX [Oral Presentation]

**Burton, M.D. (2019)** *Sex and Cell-specific actions of TLR4-induced Pain*. Oklahoma University, Health Science Center, **Invited** Speaker, Oklahoma City, OK [Oral Presentation]

**Burton, M.D. (2019)** *Delayed Onset of Neuropathic Pain in Aged Males After Peripheral Nerve Injury*. NIH Pain Consortium, **Invited** Speaker, Bethesda, MD [Oral Presentation] – Mitchell Max Award Finalist – Winner

Lai, V.<sup>+</sup>, Nottingham, B.A.<sup>+</sup>, **Burton, M.D.** (2019). *The role of microglial TLR4 in LPS-induced sickness behavior and depression*. Undergraduate Research Day, Dallas, TX [Poster Presentation]

Alvarez, A.<sup>+</sup>, Dos Santos, N.L., Thompson, L.T., **Burton, M.D.** (2019) *Age differences in post-injury inflammation in female rats*. Undergraduate Research Day, Dallas, TX [Poster Presentation]

**Burton, M.D. (2019)** *Uncovering Cell-specific Mechanisms in Sex Differences in TLR4-Dependent Pain*. American Pain Society Annual Meeting, **Invited** Speaker, Milwaukee, WI [Oral Presentation]

**Burton, M.D. (2019)** *Uncovering Cell-specific Mechanisms in Sex Differences in TLR4-Dependent Pain*. American Pain Society Annual Meeting, Future Leader Award Winner Presenter, Milwaukee, WI [Poster Presentation]

**Burton, M.D. (2019)** *Sex and cell-specific actions of TLR4-induced pain*. Feinstein Institute, Northwell Group, **Invited** Speaker, Manhasset, NY [Oral Presentation]

**Burton, M.D. (2019)** *The interconnectivity of the nervous and immune system during pain states*. Texas Women's University (TWU) Biology Department Grand Round, **Invited** Speaker, Denton, TX [Oral Presentation]

Dos Santos, N. L., Thompson, L.T., **Burton, M.D.** (2018) *Sex-dependent age-differences in response to an acute model of post-surgical pain*. Society for Neuroscience (SFN), San Diego, California [Poster Presentation]

Tierney, J.A.<sup>+</sup>, Jeong, H.S.<sup>+</sup>, Szabo-Pardi, T., **Burton, M.D.** (2018) *Palmitic Acid induces pain behavior via Toll-like Receptor 4 (TLR4) on sensory neurons*. Society for Neuroscience (SFN), San Diego, California [Poster Presentation]

Szabo-Pardi, T., Agalave, N., Barron, L.<sup>+</sup>, Lindquist, K.<sup>+</sup>, **Burton, M.D.** (2018) *Sex differences in cell-specific toll-like receptor 4 signaling on neuropathic pain development*. Society for Neuroscience (SFN), San Diego, California [Poster Presentation]

Inyang, K.E., Ramirez, E.<sup>+</sup>, Williams, M.<sup>+</sup>, **Burton, M.D.**, Dussor, G., Price, T.J. *The AMPK activator narciclasine prevents and reverses paclitaxel-induced peripheral neuropathy*. International Association for the Study of Pain (IASP) World Summit, Boston, MA Poster Session [Poster Presentation]

**Burton, M.D.\***, Szabo-Pardi, T., Cruz, I.<sup>+</sup>, Jenkins, D.M.<sup>+</sup>, Price, T.J. (2018) *Sex-Differences in Taxol-induced Neuropathic Pain Relies on TLR4 on Macrophages*. International Association

for the Study of Pain (IASP) World Summit, Boston, MA Poster Session [Poster Presentation] \*  
corresponding author

**Burton, M.D.** (2018) *Peripheral nociceptors are not responsible for mediating the analgesic actions of CB1R*. University of Illinois at Chicago Pharmacology Department Grand Round, **Invited** Speaker, Chicago, IL [Oral Presentation]

**Burton, M.D.** (2018) *Uncovering cell-specific mechanisms that explain sex differences in TLR4-dependent pain*. Keystone Symposia: Scientific Advisory Board Meeting, Keystone Symposium Diversity in Life Science Programs (DLSP) Fellow Presentation (SAB:KSF), **Invited** Session, Keystone, CO [Oral Presentation]

Tierney, J.A.<sup>+</sup>, Szabo-Pardi, T., **Burton, M.D.** (2018)  
*Palmitic Acid Induces pain via the TLR4 receptor on Sensory Neurons*. Undergraduate Research Day, Dallas, TX [Poster Presentation]

**Burton, M.D.** (2018) *Peripheral nociceptors are not responsible for mediating the analgesic actions of CB1R*. Mentoring Institute for Neuroscience Diversity Scholars (MINDS), **Invited** Session, Scottsdale, AZ [Oral Presentation]

**Burton, M.D.** (2018) *Uncovering Cell-specific mechanisms that explain sex differences in TLR4-dependent pain*. Philadelphia Pain Symposium, Drexel University, **Invited** Speaker Philadelphia, PA [Oral Presentation]

**Burton, M.D.** (2018) *Peripheral nociceptors are not responsible for mediating the analgesic actions of CB1R*. Center for Brain Health, Scientific Lecture Series **Invited** Session, Dallas, TX [Oral Presentation]

**Burton, M.D.** (2018) *Peripheral nociceptors are not responsible for mediating the analgesic actions of CB1R*. American Pain Society Meeting, Experience Exchange Arena **Invited** Session, Anaheim, CA [Oral Presentation]

**Burton, M.D.**, Milligan, A<sup>+</sup>, Szabo-Pardi, T., Castorena, C., Dussor, G., Elmquist, J.K., Price, T.J. (2018) *Peripheral nociceptors are not responsible for mediating the analgesic actions of CB1R*. American Pain Society Meeting, Anaheim, CA [Poster]

**Burton, M.D.** (2017) *Paclitaxel-induced neuropathic pain relies on TLR4 on macrophages in males only*. Society for Neuroscience: Nanosymposium, Washington D.C., **Invited** Session [Oral Presentation]

Inyang, K.E., **Burton M.D.**, Szabo-Pardi, T.<sup>+</sup>, Wentworth, E.<sup>+</sup>, Dussor, G., Price, T.J.  
*Metformin reverses neuropathic and post-surgical pain and spinal microglial activation specifically in male mice*. Society for Neuroscience, Washington D.C., Poster Session [Poster]

**Burton, M.D.** (2017) *TLR4-dependent pain depends on different cell types in males and females*. Texas Pain Research Consortia, Galveston, TX, **Invited** Session [Oral Presentation]

Sheth, A.<sup>+</sup>, Tierney, J.<sup>+</sup>, **Burton, M.D.** (2017) The role of TLR4 in diet-induced behavioral sensitization. Clark Research Scholar Program, Richardson, Texas [Poster]

**Burton, M.D.** (2017) *TLR4-dependent pain depends on different cell types in males and females*. Karolinska Institute, Stockholm, Sweden. **Invited** Speaker [Oral Presentation]

**Burton, M.D.**, Asiedu, M.N., Astarbadi, M.<sup>+</sup>, Syed, U.<sup>+</sup>, Szabo-Pardi, T.<sup>+</sup>, Underwood, E.L., Megat, S., Moy, J.K. Thompson, L.T., Price, T.J. (2017) *Delayed onset of Neuropathic Pain in the Aged after nerve injury*. Neuropathic Pain Special Interest Group Meeting: International Association for the Study of Pain (IASP), Gothenberg, Sweden. [Poster]

Megat, S., Wangzhou, A., Tzu-Fang, L., Barragàn-Iglesias, P., Moy J.K., Asiedu M., Ray, P., **Burton, M.D.**, Dussor, G., Campbell, Z., Price, T.J. (2017) *Translational Profiling Reveals Potential Targets for the Treatment of Neuropathic Pain*. Neuropathic Pain Special Interest Group Meeting: International Association for the Study of Pain (IASP), Gothenberg, Sweden. [Poster]

**Burton, M.D.**, Szabo-Pardi, T., Garner, K.M., Asiedu, M.N., Mejia, G.L., Megat, S., Barragan-Iglesias, P., Moy, J.K., Dussor, G.O., Price, T.J. (2017) *TLR4-dependent pain depends on different cell types in males and females*. American Pain Society Meeting, Pittsburgh, PA [Poster]

Jenkins, D.<sup>+</sup>, Cruz, I.<sup>+</sup>, Tierney, J.<sup>+</sup>, Szabo-Pardi, T.<sup>+</sup>, Garner, K.M.<sup>+</sup>, Price, T.J., **Burton, M.D.** (2017) *Sex differences in the development of chemotherapy-induced peripheral neuropathy*. Undergraduate Research Day at the Capitol. Austin, TX [Poster]

Ray, P., Megat, S., Barragàn-Iglesias, P., Tzu-Fang, L., Wangzhou, A., **Burton, M.D.**, Moy J.K., Dussor, G., Campbell, Z., Price, T.J. (2017). *A Genome-wide Snapshot of In Vivo and In Vitro Transcriptional and Translational Changes Underlying Pain Plasticity in Mouse Models*. Gulf Coast Consortia Translational Pain Research Symposium, Houston, TX [Poster]

Jenkins, D.<sup>+</sup>, Cruz, I.<sup>+</sup>, Tierney, J.<sup>+</sup>, Szabo-Pardi, T.<sup>+</sup>, Garner, K.M.<sup>+</sup>, Price, T.J., **Burton, M.D.** (2017) *Sex differences in the development of chemotherapy-induced peripheral neuropathy*. Undergraduate Research Scholar Award Presentations, UTD. Richardson, TX [Poster]

**Burton, M.D.** (2017) *TLR4-dependent pain depends on different cell types in males and females* American Pain Society Meeting, Pittsburgh, PA. Invited Session, Spring Pain [Oral Presentation]

Price, T.J., Megat, S., Barragàn-Iglesias, P., Tzu-Fang, L. Wangzhou, A., Ray, P., Moy J.K., **Burton, M.D.**, Campbell, Z. (2017) *TRAPs and footprints reveal the landscape of protein synthesis in DRG and TG nociceptors* Wellcome Genome Campus: The Challenge of Chronic Pain, Hinxton, Cambridge, UK [Poster]

**Burton, M.D.** (2016) *The role of cell-specific TLR4 signaling in developing chronic pain.* University of Texas at Dallas, Richardson, TX. Invited Job Talk [Oral Presentation]

**Burton, M.D.** (2016) *The role of cell-specific TLR4 signaling in developing chronic pain.* University of Chicago, Chicago, IL Invited Job Talk [Oral Presentation]

**Burton, M.D.** (2016) *The role of cell-specific TLR4 signaling in developing chronic pain.* University of Illinois at Urbana-Champaign, Urbana, IL Invited Job Talk [Oral Presentation]

**Burton, M.D.** (2016) *The role of cell-specific TLR4 signaling in developing chronic pain.* University of South Carolina, Columbia, SC. Invited Job Talk [Oral Presentation]

Wentworth E.<sup>+</sup>, Szabo-Pardi, T., Inyang, K., **Burton, M.D.**, Price, T.J. (2016) *Analyzing the effects of AMPK activation after nerve injury in male and female mice using metformin.* Clark Research Scholar Program, Richardson, Texas [Poster]

Wentworth E., Szabo-Pardi, T., Inyang, K., **Burton, M.D.**, Price, T.J. (2016) *Sex Differences of AMPK activators on neuropathic pain.* Molecular Biology Honors Capstone, Richardson, Texas [Poster]

**Burton, M.D.**, Tillu, D.V., Mejia, G.L., Mazhar, K., Asiedu, M.N., Inyang, K., Hughes, T., Lian, B., Dussor, G., Price, T.J. (2016) *Pharmacological activation of AMPK inhibits incision-evoked mechanical hypersensitivity and the transition to a chronic pain state.* American Pain Society Meeting, Austin, Texas [Poster]

**Burton, M.D.**, Udit S., Bookout A.L., Lee, S., Lee, C.E., Jia, L., Gautron, L., Elmquist, J.K. *The role of sensory neuron toll-like receptor 4 in dietary energy balance.* (2015) Keystone Symposia. Neural Control of metabolic physiology and diseases (D4). Snowbird, UT [Poster]

**Burton, M.D.** (2015) *Pathways to careers as a minority in science.* Endocrine Society Satellite Meeting, Hunter College, New York City, NY. Invited Talk [Oral Presentation]

**Burton, M.D.** (2014) *Minorities in science.* Endocrine Society Meeting, Chicago, IL. Invited Talk [Oral Presentation]

Conrad, M.S., Elmore, M.R.P., **Burton, M.D.**, Rytych, J.L.<sup>+</sup>, Johnson, R.W. (2013) *Early-life viral infection causes neuroinflammation, cognitive deficits, and changes in neurogenesis in the neonatal piglet.* Society for Neuroscience Research Society Meeting, San Diego, CA. [Poster]

**Burton, M.D.** (2012) *Interleukin-6 trans-signaling: implications for neuroinflammation and cognitive deficits in the aged.* UT Southwestern Medical Center, Dallas, TX. Invited Job Talk [Oral Presentation]

**Burton, M.D.** (2012) *Interleukin-6 trans-signaling: implications for neuroinflammation and cognitive deficits in the aged.* MD Anderson Cancer Center, Houston, TX. Invited Job Talk [Oral Presentation]

Rytych, J.L.<sup>+</sup>, M.R.P. Elmore, **M.D. Burton**, R.N. Dilger, R.W. Johnson (2012) *Early life iron deficiency impairs spatial cognition in neonatal piglets.* Experimental Biology. San Diego, California, USA [POSTER]

Rytych, J.L.<sup>+</sup>, M.R.P. Elmore, **M.D. Burton**, R.N. Dilger, R.W. Johnson (2012) *Early life iron deficiency impairs spatial cognition in neonatal piglets.* UIUC NSGSA Nutritional Symposium [Poster]

**Burton, M.D.**, Johnson, R.W. (2011) *The Involvement of interleukin-6 trans-signaling in LPS-induced behavioral deficits in the aged.* Psychoneuroimmunology Research Society, Regional Meeting (Chicago BBI) Chicago, IL [Oral Presentation]

**Burton, M.D.**, Sparkman, N.L., Johnson, R.W. (2011) *Inhibition of interleukin-6 trans-signaling in the brain inhibits lipopolysaccharide-induced sickness behavior.* Psychoneuroimmunology Research Society, Chicago, IL. [Brain, Behavior, and Immunity, vol 25, 2, supplement 2] [Poster]

Johnson, R.W., Dilger, R.N., Conrad, M.S., Elmore, M.R.P., **Burton, M.D.**, Ivarson, J.L.<sup>+</sup>. (2011) *The Pig (Sus Scrofa) as a model for infant brain and cognitive development.* Swine in Biomedical Research, Chicago, IL. [Poster]

**Burton, M.D.**, Johnson, R.W. (2010) *Altered Histone Acetylation is associated with Age-dependent Memory Impairment in Mice.* Integrative Immunology and Behavior Seminar Series, University of Illinois, Urbana, IL [Oral Presentation]

**Burton, M.D.**, Johnson, R.W. (2009) *Interleukin-6 receptor signaling in the aged brain during infection.* National Institute of Aging, Technical Assistance Workshop, Atlanta, GA [Oral Presentation]

**Burton, M.D.**, Johnson, R.W. (2009) *Interleukin-18-Mediated Microglia/Astrocyte Interaction in the Spinal Cord Enhances Neuropathic Pain Processing after Nerve Injury.* Integrative Immunology and Behavior Seminar Series, University of Illinois, Urbana, IL [Oral Presentation]



**Burton, M.D.**, Johnson, R.W. (2008) *TiPE2, a negative regulator of innate and adaptive immunity that maintains immune homeostasis*. Integrative Immunology and Behavior Seminar Series, University of Illinois, Urbana, IL [Oral Presentation]

Sparkman, N.L., Heyen, J.R.R., **Burton, M.D., Jr.**, Beverly, J.L., & Johnson, R.W. (2005) *Mice deficient in interleukin-6 are refractory to lipopolysaccharide-induced disruption in working memory*. Psychoneuroimmunology Research Society, Denver, CO. [Brain, Behavior, and Immunity, vol 19, 4, supplement 1] [Poster]

**Burton, M.D.**, Carnes, K, Hess, R.A. (2004) *An analysis of the Acrosome Reaction*. McNair Scholars Institute, Research Presentation, Urbana, IL [Oral and Poster Presentation]

### **FACULTY MENTORING – UNDERGRADUATE & GRADUATE**

Caeley Bryan. **Graduate Student**. Neuroimmune crosstalk and Depression. 2020-present

Melissa E. Lenert. **PhD Student**. Sex Difference and Musculoskeletal Pain 2019-present (Masters, 2017-2019, also mentee)

Natalia Dos Santos. **PhD Student**. Pain across the lifespan 2018-present

Aditya Sheth. **Undergraduate student**. The role of TLR4 in diet-induced behavioral Sensitization. 2017-2018

Highlight. Aditya was a Clark Scholar.

Dana Jenkins. **Undergraduate student**. Sex difference in chemotherapy-induced peripheral neuropathy. 2016-2018

Highlight. Dana is an Undergraduate Research Scholar.

Jessica Tierney. **Graduate Student**. The effects of Diet on TLR4-induced pain. 2019-Present

Highlight. Jessica is a Buhrmester Research Award Recipient and URSA Recipient. (Undergraduate researcher 2015-2019)

Thomas Szabo-Pardi. **PhD Student**. Immune-mediation of behavior. 2017-present.

(Undergraduate Researcher 2015-2017)

Katherine Garner. **Graduate Student**. Sex differences in neuroinflammation. 2017-present

(Undergraduate Researcher 2015-2017)

## **PRE-FACULTY MENTORING – UNDERGRADUATE & GRADUATE**

Emma Wentworth. **Undergraduate student.** Sex differences in the effects of AMPK activators. 2016-2017

Highlight. Emma is a current DMD/PhD candidate at the University of Connecticut

Ileana Cruz. Undergraduate Student. Cell-specific actions of chemotherapy-induced peripheral neuropathy. 2016-2017

Mariam Astarbadi. **Graduate Student.** Aging delays the onset of surgery-induced neuropathic pain. 2015-2016

Highlight. Mariam is a current medical student at the University of Arizona.

Jessica Tierney. **Undergraduate student.** The effects of Diet on TLR4-induced pain. 2015-Present

Umar Syed. **Undergraduate Student.** Aging delays the onset of surgery-induced neuropathic pain. 2015-2016. Highlight. Umar is enrolled in DO school.

Brigitte Townsend. **Graduate student.** Sulforaphane as a potential nutritional intervention to reduce neuroinflammation associated with aging and sickness behavior. 2011-2012

Highlight. Brigitte is currently a faculty member at Liberty University.

Jennifer Rytych. **Graduate student.** Iron deficiency affects spatial learning in neonatal piglets. 2010-2012

Highlight. Jennifer is a current medical student at Rosalind Franklin Medical School.

Ravi Amin. **Undergraduate student.** The effects of luteolin on aging and neuroinflammation. 2010-2012

Highlight. Dr. Amin is a recent Dental School Graduate (UCLA).

## **PEER REVIEWING EXPERIENCE**

**Deputy Editor,** Neurobiology of Pain (2021- )

**Editorial Board Member,** Journal of Neuroinflammation (2021- )

**Associate Review Editor,** Frontiers in Pain Research, Pharmacological Treatment of Pain, Frontiers, (2020- )

**Associate Editor,** Frontiers in Immunology, Molecular Innate Immunity. Guest Editor of Neural control of Immunity, Frontiers, (2020-2021)

**Consulting Editor**, Behavioral Neuroscience (BNE), APA Publishing, (2020 - )

**Early Career Reviewer (ECR)**, National Institutes of Health, Center for Scientific Review, NINDS (2018- ) Study Sections: 2018/11 ZNS1 SRB-B (63), 2019/05 ZNS1 SRB-B (65), ZNS1 SRB-B (66) 2021 ZNS1 SRB-B(80)

**Ad hoc – Early Career Reviewer (ECR)** Molecular Neuropharmacology and Signaling (MNPS) Study section: October 2020, and February 2021

**Early Career Reviewer**, Endocrinology, the journal of the Endocrine society (2019-2021)

**Grant Reviewer/Trainee**, Howard Hughes Medical Institute-National Institutes of Health, Center for Scientific Review Workshop, Chevy Chase, MD 2018

**Ad hoc Reviewer**, Journal of Neuroscience (2017- ) (Neuroscience)

**Ad hoc Reviewer**, Journal of Pain (2016- ) Neural Signaling and Plasticity (Neuroscience)

**Ad hoc Reviewer**, Pain (2016- ) (Neuroscience)

**Ad hoc Reviewer**, British Journal of Pharmacology (2015- ) Neural Signaling and Plasticity (Neuroscience)

**Ad hoc Reviewer**, European Journal of Pain (2015- ) Neuroimmunology (Neuroscience)

**Ad hoc Reviewer**, Brain Behavior and Immunity (2012- ) Neuroimmunology (Neuroscience)

**Ad hoc Reviewer**, Psychoneuroendocrinology (2012- ) Neuroimmunology (Neuroscience)

## **COMMITTEE ASSIGNMENTS AND ADMINISTRATIVE SERVICES**

**Committee Member**, Nominating Committee, The Endocrine Society (2021- )

**Board Member**, Project ACCESS, Alliance to Catalyze Change for Equity in STEM Success, (2020- )

**Associate Chair**, Basic Science Advisory Group (BSAG), Endocrine Society 2019-2022

**Board Member**, Scientific Program Committee, United States Association for the Study of Pain, (USASP) (2020)

**Advisory Board member**, Mentoring Institute for Neuroscience Diversity Scientists (MINDS) (2018-20122)

**Advisory Board member**, LSAMP Bridge-to-Doctorate Program (2018-2021)

**Search Committee member**, Dean for the School of Behavioral and Brain Sciences University of Texas at Dallas (2018)

**Faculty Member**, Institutional Biosafety & Chemical Safety Committee, University of Texas at Dallas, (2017-2019)

### **Scientific Advisory Board, Member**

Keystone Symposia, Keystone/Denver, CO (2017-2018)

Publications Core Committee, Trainee Member

Endocrine Society, Washington D.C. (2015-2016)

**Search Committee member**, Research Scientist  
University of Illinois, Urbana-Champaign, IL (2012) (Rodney Johnson)

**Search Committee member**, Assistant to the Head of Pathology  
University of Illinois, Urbana-Champaign, IL (2012) (Gregory Freund)

**Search Committee member**, Research Specialist  
University of Illinois, Urbana-Champaign, IL (2011) (Rodney Johnson)

**Committee Chair**, Behavioral Suite Users Committee,  
University of Illinois, Urbana-Champaign, IL (2010-2012) (Robert Dantzer)

**Search Committee member**, NIH Recovery Act, Challenge grant

University of Illinois, Urbana-Champaign, IL (2009) (Gregory Freund)

## **TEACHING EXPERIENCE**

**Assistant, Professor**, University of Texas at Dallas, Richardson, TX Fall 2020,  
Neuroimmunology

**Assistant, Professor**, University of Texas at Dallas, Richardson, TX Spring 2020,  
Neuroimmunology

**Assistant, Professor**, University of Texas at Dallas, Richardson, TX Spring 2019,  
Neuroimmunology

**Assistant, Professor**, University of Texas at Dallas, Richardson, TX Spring 2018,  
Neuroimmunology

**Instructor**, University of Texas at Dallas, Richardson, TX Fall 2016  
Neurophysiology

**Guest Lecturer**, University of Texas at Dallas, Richardson, TX September 2015  
Neuropharmacology (Neuroscience)

**Adjunct Instructor**, Eastfield College, Mesquite, TX August 2013 – January 2015  
Anatomy & Physiology (Biology 2401)

**Teaching Assistant**, University of Illinois, Urbana, IL January 2011 – May 2011  
Animal Physiology (ANSC 362)

**Graduate Teaching Assistant**, University of Illinois, Urbana, IL September 2010  
December 2010 Behavior of Domestic Animals (ANSC 462)

## **PROFESSIONAL REFERENCES**

Joel K. Elmquist, D.V.M., Ph.D.  
Professor of Internal Medicine and Pharmacology  
University of Texas Southwestern Medical Center  
Department of Internal Medicine  
Division of Hypothalamic Research  
5323 Harry Hines Blvd. Dallas, TX 75390  
**E-mail:** [joel.elmquist@utsouthwestern.edu](mailto:joel.elmquist@utsouthwestern.edu)  
**Post Doc Advisor (co-)**

Theodore “Ted” Price, Ph.D.  
Associate Professor of Neurobiology of Pain  
University of Texas, at Dallas  
School of Behavioral and Brain Sciences  
BSB 14.102G  
800 W. Campbell Rd. Richardson, TX, 75080  
**Phone:** (972) 883-4311  
**E-mail:** [theodore.price@utdallas.edu](mailto:theodore.price@utdallas.edu)  
**Post Doc Advisor (co-)**

Robert Dantzer, D.V.M., PhD  
Professor and Deputy Chairman  
MD Anderson Cancer Center  
Division of Internal Medicine  
Department of Symptom Research  
Pickens Academic Tower  
1400 Pressler Street  
Unit 1450, FCT 11.5062  
Houston, TX 77030  
**Phone:** 713-563-4793  
**Email:** [rdantzer@mdanderson.org](mailto:rdantzer@mdanderson.org)  
**Mentor**

Gregory Dussor, Ph.D.  
Associate Professor of Neurobiology of Pain  
University of Texas, at Dallas  
School of Behavioral and Brain Sciences  
BSB 14.502  
800 W. Campbell Rd. Richardson, TX, 75080  
**Phone:** (972) 883-2385  
**E-mail:** [gregory.dussor1@utdallas.edu](mailto:gregory.dussor1@utdallas.edu)  
**Postdoc committee Chair**

Rodney W. Johnson, Ph.D.  
Professor of Integrative Immunology and Behavior  
University of Illinois, at Urbana-Champaign  
Department of Animal Science  
4 Animal Science Laboratory  
1207 W. Gregory Dr. Urbana, IL, 61801  
**Phone:** (217) 333-2118  
**E-mail:** [rwjohn@illinois.edu](mailto:rwjohn@illinois.edu)  
**Ph.D. Advisor**

Gregory G. Freund, M.D.  
Professor of Pathology  
Department of Pathology, Head  
University of Illinois, at Urbana-Champaign  
211 Edward R. Madigan Laboratory  
1201 W. Gregory Dr. Urbana, IL, 61801  
**Phone:** (217) 244-8839  
**E-mail:** [freun@illinois.edu](mailto:freun@illinois.edu)  
**Graduate Committee Chair**