

# Robert E. Sorge

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## Interests

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### Research

- Impact of diet on pain, recovery from injury and immune system activity
- Diet-induced changes in response to drugs of abuse
- Role of immune system in drug reward
- Development of novel models of pain

### Teaching

- Dynamics of Pain
- Brain, Mind & Behavior
- Animal Behavior
- Psychopharmacology

## Employment

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**Assistant Professor** **2012-Present**  
Department of Psychology, University of Alabama at Birmingham, Birmingham, AL

**Postdoctoral Fellow** **2009-2012**  
Department of Psychology, McGill University, Montreal, QC

**Postdoctoral Fellow** **2006-2009**  
Department of Pharmacology and Therapeutics, McGill University, Montreal, QC

## Education

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**Ph.D., Psychology** **2001-2006**  
Department of Psychology, Concordia University, Montreal, QC

**M.A., Experimental Psychology** **2000-2001**  
Department of Psychology, Wilfrid Laurier University, Waterloo, ON

**H.B.Sc. (Psychology, Biology minor)** **1996-2000**  
McMaster University, Hamilton, ON

## Funding

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**Current**  
**Immune System Modulation of Pain via Diet** **06/2015 – 05/2018**  
Rita Allen Scholars and American Pain Society \$150,000

Role: Principal Investigator

**Smad signaling in skeletal muscle as a biomarker of disease progression in ALS**  
03/2016 – 02/2021  
NINDS (R01NS092651) \$321,500  
Role: Co-Investigator

**Translation control of pain plasticity**  
02/2015 – 01/2019  
NINDS (R01NS065926) \$180,000  
Role: Subcontract PI

**Under Review**

**Fibromyalgia RELief via Effects of Diet Orchestrated through the Microbiota (FREEDOM)**  
09/2018 – 08/2023  
NIH (NINR) \$2,124,606  
Role: Principal Investigator

**Diet InterVention Evaluated by Race and Oxidative Stress Effects in Pain (DIVERSEpain)**  
07/2018 – 06/2023  
NIH (NIMHD) \$1,915,941  
Role: Principal Investigator

**PQ11: Using diet to promote immune-related tumor clearance**  
07/2018 – 06/2023  
NIH (NCI) \$2,077,016  
Role: Co-Investigator (PI: Norian)

**Sex-related differences with spinal manual therapy in an NGF-model of myofascial low back pain**  
04/2018 – 03/2020  
NIH (NCCIH) \$150,000  
Role: Co-Investigator (PI: Reed)

**Completed**

**Development and Validation of a Zebrafish Model of Pain**  
08/2014 – 02/2016  
UAB Faculty Development Grant \$10,000  
Role: Principal Investigator

**The effect of diet and dietary intervention on behavioral and physiological indices of pain in rats**  
06/2014 – 12/2015  
International Association for the Study of Pain Early Career Award \$30,000  
Role: Principal Investigator

**The effects of diet on behavioral and physiological markers of pain**  
05/2014 – 12/2015  
UAB College of Arts and Sciences Interdisciplinary Award \$44,500  
Role: Principal Investigator

**Neuroimmune interactions in the modulation of pain: discovery of novel therapeutics**  
07/2013 – 06/2014  
UAB Comprehensive Neuroscience Center Research Acceleration Award \$90,000  
Role: Co-Principal Investigator

**Contribution of the innate immune system to reward**  
07/2013 – 06/2014

## Publications

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\*\*Students or employees under supervision are underlined\*\*

### Under Review

### Published or In Press

1. Totsch, S. K., Meir, R. Y., Quinn, T. L., Lopez, S. A., Gower, B. A. & Sorge, R. E. (in press). Effects of a Standard American Diet and an Anti-Inflammatory Diet in male and female mice. *European Journal of Pain*.
2. Kolata, S. M, Nakao, K, Jeevakumar, V. Farmer-Alroth, E. L., Fujita, Y., Bartley, A., Rompala, G. R., **Sorge, R. E.**, Jimenez, D. V., Martinowich, K., Mateo, Y., Hashimoto, K., Dobrunz, L. E., & Nakazawa, K. (in press). Neuropsychiatric Phenotypes Produced by GABA Reduction in Mouse Cortex and Hippocampus. *Neuropsychopharm.*
3. Totsch, S. K., Quinn, T. L., Strath, L. J., McMeekin, L. J., Cowell, R. M., Gower, B. A. & **Sorge, R. E.** (2017). The impact of the standard American diet in rats: effects on behavior, physiology and recovery from inflammatory injury. *Scandinav J Pain, 17:* 316-324.
4. Totsch, S. K. & **Sorge, R. E.** (2017). Immune system involvement in specific pain conditions. *Mol Pain. Epub Jan 1.*
5. Martin, L. J., Smith, S. B., Khoutorsky, A., Magnussen, C. A., Samoshkin, A., **Sorge, R. E.**, Cho, C., Yosefpour, N., Sivaselvachandran, S., Tohyama, S., Cole, T., Khuong, T. M., Mir, E., Gibson, D. G., Wieskopf, J. S., Sotocinal, S. G., Austin, J. S., Meloto, C. B., Gitt, J. H., Gkogkas, C., Sonenberg, N., Greenspan, J., Fillingim, R. B., Ohrbach, R., Slade, G. D., Knott, C., Dubner, R., Nackley, A. G., Ribeiro-da-Silva, A., Neely, G. G., Maixner, W., Zaykin, D. Z., Mogil, J. S., & Diatchenko, L. (2017). Involvement of epiregulin and epidermal growth factor receptor in pain. *Journal of Clinical Investigations. Epub Aug 7.*
6. 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.
7. Merlin, J. S., Westfall, A. O., Heath, S. L., Goodin, B. R., Stewart, J. C., **Sorge, R. E.**, Younger J. W. (2017). IL-1 $\beta$  levels are associated with chronic multisite pain in people living with HIV. *J Acquir Immune Def Syndr, 75:* e99-e103.
8. **Sorge, R. E.** & Totsch, S. K. (2017). Sex differences in pain. *Journal of Neuroscience Research, 95:* 1271-1281.
9. **Sorge, R. E.**, Khoutorsky, A., Prager-Khoutorsky, M., Pawlowski, S. A., Longo, G., Jafarnejad, S. M., Tahmasebi, S., Martin, L. J., Pitcher, M. H., Ghogkas, C. G., Sharif-Naeini, R., Ribeiro-da-Silva, A., Bourque, C. W., Cervero, F., Mogil, J. S. & Sonenberg, N. (2016). eIF2 $\alpha$  phosphorylation controls thermal nociception. *Proc Natl Acad Sci, 113:* 11949-11954.
10. Totsch, S. K., Waite, M. E., Tomkovich, A., Quinn, T. L., Gower, B. A. & **Sorge, R. E.** (2016) Total Western Diet Alters Mechanical and Thermal Sensitivity and Prolongs Hypersensitivity Following Complete Freund's Adjuvant in Mice. *J Pain, 17:* 119-125.
11. Khoutorsky, A., Bonin, R. P., **Sorge, R. E.**, Gkogkas, C., Jafarnejad, M., Alain, T., Perez-Sanchez, J., Martin, L. J., De Koninck, Y., Mogil, J. S. & Sonenberg, N. (2015). Translational control of nociception via 4E-binding protein 1. *eLife.*

12. **Sorge, R. E.**, Mapplebeck, J. C, Rosen, S., Beggs, S., Taves, S., Alexander, J. K., Martin, L. J., Austin, J. S., Sotocinal, S., Chen, D., Yang, M., Shi, X. Q., Huang, H., Pillon, N. J., Bilan, P. J., Tu, Y., Klip, A., Ji, R. R., Zhang, J., Salter, M. W., Mogil, J. S. (2015). Different immune cells mediate mechanical pain hypersensitivity in male and female mice. *Nat Neurosci*, 18: 1081-3.
13. Kim, J. Y., Tillu, D. V., Quinn, T. L., Mejia, G. L., Shy, A., Asiedu, M. N. K., Murad, E., Totsch, S. K., **Sorge, R. E.**, Mantyh, P. W., Dussor, G. & Price, T. J. (2015). Spinal dopaminergic projections control the transition to pathological pain plasticity via a D1/D5-mediated mechanism. *J Neuroscience*, 35: 6307-17.
14. Wieskopf, J. S., **Sorge, R. E.**, Limapichat, W., Al-Quazzaz, M., Smith, S. B., Austin, J. S., Slepian, P. M., Clarke, S., Drenan, R., McIntosh, J. M., Maskos, U., Changeux, J. P., Aasvang, E., Dai, F., Lai, W., Srinivasan, R., Mathur, J., Devor, M., Maixner, W., Diatchenko, L., Belfer, I., Dimaj. I., Lester, H. A., Patapoutian, A. & Mogil, J. S. (2015). The nicotinic alpha6 subunit gene determines variability in chronic pain sensitivity via cross-inhibition with p2x2/3 receptors. *Science and Translational Medicine*, 7.
15. 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.
16. Totsch, S. K., Waite, M. E., & Sorge, R. E. (2015). Dietary influence on pain via the immune system. In T. J. Price & G. O. Dussor (Eds). *Molecular Biology of Pain, Progress in Molecular and Translational Science*. Elsevier. 131: 435-69.
17. Tillu, D. V., Hassler, S. N., Burgos-Vega, C. C., Quinn, T. L., **Sorge, R. E.**, Dussor, G., Boitano, S., Vagner, J. & Price T. J. (2015). Protease activated receptor 2 (PAR2) activation is sufficient to induce the transition to a chronic pain state. *Pain*, 156: 859-67.
18. Cahill, L. S., Laliberte, C. L., Liu, X. J., Bishop, J., Nieman, B. J., Mogil, J. S., **Sorge, R. E.**, Jones, C. D., Salter, M. W. & Henkelman R. M. (2014). Quantifying blood-spinal cord barrier permeability after peripheral nerve injury in the living mouse. *Mol Pain*, 10: 60.
19. Si, Y., Cui, X., Kim, S., Wians, R., **Sorge, R. E.**, Oh, S., Al-Sharabati, M., Lu, L., Claussen, G., Anderson, T., Yu, S., Morgan, D., Kazamel, M., & King, P. H. (2014). Smads as biomarkers in amyotrophic lateral sclerosis. *Annals Clin Transl Neurol*, 10: 778-87.
20. **Sorge, R. E.**, Martin, L. J., Isbester, K. A., Sotocinal, S. G., Rosen, S., Tuttle, A. H., Weiskopf, J. S., Acland, E. L., Dokova, A., Kadoura, B., Leger, P., Mapplebeck, J. C. S., McPhail, M., Delaney, A., Wigerblad, G., Schumann, A. P., Quinn, T., Frasnelli, J., Svensson, C.I., Sternberg, W. F. & Mogil, J. S. (2014). Olfactory exposure to males, including human males, produces stress and stress-induced analgesia in rodents. *Nat Meth*, 6: 629-32.
21. \***Sorge, R. E.**, Melemedjian, O. K., Khoutorsky, A., Yan, J., Asiedu, M. N., Valdez, A., Ghosh, S., Dussor, G., Mogil, J. S., Sonenberg, N. & Price, T. J. (2013) mTORC1 inhibition induces sensory neuron hyperexcitability and allodynia via IRS1-dependent feedback activation of ERK. *Pain*, 154: 1080-91 \* co-first author
22. **Sorge, R. E.**, LaCroix-Fralish, M. L., Tuttle, A. H., Khoutorsky, A., Sotocinal, S. G., Austin, J. S., Melmed, K., Wood, J. N., Shi, Y., Naoumova, A. & Mogil, J. S. (2013). The yin and yang of pain: variability in formalin test nociception and morphine analgesia produced by the yin yang 1 transcription factor gene. *Genes, Brain and Behavior*, 12: 405-13.
23. Khoutorsky, A., Yanagiya, A., Gkogkas, C., Fabian, M. R., Prager-Khoutorsky, M., Gamache, K., Bouthiette, F., Parysan, A., **Sorge, R. E.**, Mogil, J. S., Nader, K., Lacaille, J. C. & Sonenberg, N. (2013) Control of synaptic plasticity and memory via suppression of poly(A)-binding protein. *Neuron*, 78: 298-311.

24. Tsao, D., Wieskopf, J. S., Rashid, N., **Sorge, R. E.**, Redler, R. L., Segall, S. K., Mogil, J. S., Maixner, W., Dokholyan, N. V. & Diatchenko, L. (2012). Serotonin-induced hypersensitivity via inhibition of catechol o-methyltransferase activity. *Mol Pain*, 8; 25.
25. Malfait, A. M., Seymour, A. B., Gao, F., Tortorella, M. D., Graverand-Gastineau, M. P., Wood, L. S., Doherty, M., Doherty, S., Zhang, W., Arden, N. K., Vaughn, F. L., Leaverton, P. E., Spector, T. D., Hart, D. J., Maciewicz, R. A., Muir, K. R., Das, R., **Sorge, R. E.**, Sotocinal, S. G., Schorscher-Petcu, A., Valdes, A. M. & Mogil, J. S. (2012) A role for PACE4 in osteoarthritis pain: Evidence from human genetic association and null mutant phenotype. *Annals Rheumatic Dis*, 71; 1042-1048.
26. **Sorge, R. E.**, Trang, T., Dorfman, R., Smith, S. B., Beggs, S., Ritchie, J., Austin, J-S., Zaykin, D. V., Vander Meulen, H., Costigan, M., Herbert, T. A., Yarkoni-Abitbul, M., Tichauer, D., Livneh, J., Gershon, E., Zheng, M., Tan, K., Johns, S. L., Slade, G. D., Jordan, J., Woolf, C. J., Peltz, G., Maixner, W., Diatchenko, L., Seltzer, Z., Salter, M. W., & Mogil, J. S. (2012). Genetically determined P2X7 receptor pore formation regulates variability in chronic pain sensitivity. *Nat Med*, 18; 595-599.  
 \*\*\*Selected by the National Human Genome Research Institute's (NHGRI) Genomic Advances of the Month
27. **Sorge, R. E.**, LaCroix-Fralish, M. L., Bailey, A. L., Tuttle, A. H., Sotocinal, S. G., Austin, J-S., Ritchie, J., Chanda, M. L., Graham, A. C., Topham, L., Beggs, S., Salter, M. W., & Mogil, J. S. (2011). Spinal cord toll-like receptor 4 mediates chronic inflammatory and neuropathic hypersensitivity in males but not females. *J Neurosci*, 31: 15450-4.
28. Mogil, J. S., **Sorge, R. E.**, LaCroix-Fralish, M. L., Smith, S. B., Fortin, A, M Sotocinal, S. G., Ritchie, J., Austin, J-S., Schorscher-Petcu, A., Melmed, K., Bittong, R. A., Mokris, B., Neubert, J. K., Campbell, C. M., Edwards, R. R., Campbell, J. N., Crawley, J. N., Lariviere, W. R., Sternberg, W. F., Balaban, C. D., Belfer, I., & Fillingim, R. B. (2011). Pain sensitivity and vasopressin analgesia in mice and humans is mediated by a gene-environment interaction involving the AVPR1A gene and acute stress. *Nat Neuro*, 14:1569-73.
29. **Sorge, R. E.**, Matsumiya, L., Sotocinal, S. G., Tabaka, J., Zaloum, A., King, O. D., & Mogil, J. S. (2012). A re-evaluation of the efficacy of postoperative analgesics in the laboratory mouse based on the mouse grimace scale. *JAALAS*, 51: 42-49. \*co-first author.
30. Sotocinal, S. G., **Sorge, R. E.**, Zaloum, A., Tuttle, A. H., Martin, L. J., Wieskopf, J. S., Mapplebeck, J. C. S., Wei, P., Zhan, S., Zhang, S., McDougall, J. J., King, O. D., & Mogil, J. S. (2011). The rat grimace scale: a partially automated method for quantifying pain in the laboratory rat via facial expressions. *Mol Pain*, 7: 55.
31. Langford, D.J., Bailey, A.L., Chanda, M.L., Clarke, S.E., Drummond, T.E., Echols, S., Glick, S., Ingrao, J., Klassen-Ross, T., LaCroix-Fralish, M.L., Matsumiya, L., **Sorge, R.E.**, Sotocinal, S.G., Tabaka, J.M., Wong, D., van den Maagdenberg, A.M.J.M., Ferrari, M.D., Craig, K.D., and Mogil, J.S. (2010). Coding of facial expressions of pain in the laboratory mouse. *Nature Meth*, 7:447-449.
32. Schorscher-Petcu, A., Sotocinal, S. G., Ciura, S. Dupre, A., Ritchie, J., **Sorge, R. E.**, Crawley, J. N., Hu, S-B., Nishimori, K., Young, L. J., Tribollet, R., Quirion, R. & Mogil, J. S. (2010). Oxytocin-induced analgesia and scratching are mediated by the vasopressin-1A receptor in the mouse. *J Neurosci*, 30: 8274-8284.
33. **Sorge, R. E.**, & Clarke, P. B. S. (2010) Self-Administration: Nicotine, chapter in *Animal Models of Drug Addiction*, ed. M.C. Olmstead, Humana Press.
34. **Sorge, R. E.**, Pierre, V. P. & Clarke, P. B. S. (2009). Facilitation of intravenous nicotine self-administration in rats by motivationally neutral sensory cues. *Psychopharmacology*, 207: 191-200.

35. **Sorge, R. E.** & Clarke, P. B. S. (2009). Rats self-administer intravenous nicotine delivered in a novel smoking-relevant procedure: effects of dopamine antagonists. *J Pharm Exp Ther*, 330: 633-640.
36. Leri, F., **Sorge, R. E.**, Cummins, E., Woehrling, D., Pfaus, J. G., & Stewart, J. (2007). High dose methadone maintenance in rats: effects on cocaine self-administration and general motivation. *Neuropsychopharmacology*, 32: 2290-2300.
37. Hood, S., **Sorge, R. E.**, & Stewart, J. (2007). Chronic buprenorphine reduces the response to sucrose-associated cues in non food-deprived rats. *Pharmacology, Biochemistry & Behavior*, 86: 566-575.
38. Caruana, D. A., **Sorge, R. E.**, Stewart, J., & Chapman, C. A. (2006). Dopamine has bidirectional effects on synaptic responses to cortical inputs in layer II of the lateral entorhinal cortex. *Journal of Neurophysiology*, 96: 3006-3015.
39. **Sorge, R. E.**, & Stewart, J. (2006). The effects of chronic buprenorphine on intake of heroin and cocaine in rats and its effects on nucleus accumbens dopamine levels during self-administration. *Psychopharmacology*, 188: 28-41.
40. **Sorge, R. E.**, & Stewart, J. (2006). The effects of long-term chronic buprenorphine treatment on the locomotor and nucleus accumbens dopamine response to acute heroin and cocaine in rats. *Pharmacology, Biochemistry & Behavior*, 84: 300-305.
41. **Sorge, R. E.**, & Stewart, J. (2005). The contribution of drug history and time since termination of drug taking on vulnerability to stress-induced cocaine seeking in rats. *Psychopharmacology*, 183, 210-217.
42. **Sorge, R. E.**, Rajabi, H. & Stewart, J. (2005). Rats maintained chronically on buprenorphine show reduced heroin and cocaine seeking in tests of extinction and drug-induced reinstatement. *Neuropsychopharmacology*, 30, 1681-1692.
43. Parker, L. A., Burton, P., **Sorge, R. E.** & Yakiwchuk, C. (2004). Effect of low doses of  $\Delta^9$ -tetrahydrocannabinol and cannabidiol on the extinction of cocaine- and amphetamine-induced conditioned place preference learning. *Psychopharmacology*, 175, 360-366.
44. Leri, F., Tremblay, A., **Sorge, R. E.** & Stewart, J. (2004). Effects of methadone maintenance on heroin-, cocaine- and stress-induced relapse in a rodent model of poly-drug use. *Neuropsychopharmacology*, 29, 1312-1320.
45. Capriles, N., Rodaros, D., **Sorge, R. E.** & Stewart, J. (2003). A role for the prefrontal cortex in stress- and cocaine-induced reinstatement of cocaine seeking in rats. *Psychopharmacology*, 168, 66-74.
46. **Sorge, R. E.**, Fudge, M. A. & Parker, L. A. (2002). Effect of sodium deprivation on morphine- and lithium-induced conditioned salt avoidance and taste reactivity. *Psychopharmacology*, 160, 84-91.
47. Galef, B. G., Jr. & **Sorge, R. E.** (2000). Use of PVC conduits by rats of various strains and ages housed singly and in pairs. *Journal of Applied Animal Welfare Science*, 3(4), 279-292.

## Presentations

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### Symposia Organization

1. **Sorge, R. E.** (Moderator/Dicussant), Figueroa, J. & Ramsden, C. (2017, May). From molecules to man: Diet as a treatment for chronic pain. Symposium presented at the American Pain Society annual meeting – Pittsburgh, USA.
2. **Sorge, R. E.** (Moderator), Davidson, S., Hanlon, K. & Ye, Y. (2017, May). Novel directions in basic research: Rita Allen Scholars. Symposium presented at the American Pain Society annual meeting – Pittsburgh, USA.

3. **Sorge, R. E.** (Chair/Discussant), Barrett, S. P., Samaha, A. -N., Kenny, P. J., Palmatier, M. I. & Brunzell, D. H. (2009, April). The Next Generation of Investigators: Novel Approaches to an Old Problem. Symposium presented at the joint meeting of the Society for Research on Nicotine and Tobacco and the Society for Research on Nicotine and Tobacco – Europe, Dublin, Ireland.

### **Invited**

1. **Sorge, R. E.** (2017, November). Diet and Pain: Interactions and Interventions. Invited speaker at A Precision Medicine Approach to pain: A Symposium, Univ. Conn School of Medicine, Farmington, CT, USA.
2. **Sorge, R. E.** (2017, August). Medical marijuana: benefits, side effects and the law. CME presentation at St. Vincent's Hospital East, Birmingham, AL, USA.
3. **Sorge, R. E.** (2016, October). Diet and Inflammation: Interactions and Interventions. Colloquium presented at the 2016 UAB Pain Conference, Birmingham, AL, USA.
4. **Sorge, R. E.** (2016, September). Diet and Inflammation: Interactions and Interventions. Colloquium presented at the Department of Psychology, Auburn University, Auburn AL, USA.
5. **Sorge, R. E.** (2016, June). Diet and Inflammation. Colloquium presented to the UAB Department of Physical Therapy, Birmingham, AL, USA.
6. **Sorge, R. E.** (2016, May). Sex Differences in Pain Pathways. Talk presented to the American College of Sports Medicine, Boston, MA.
7. **Sorge, R. E.** (2015, November). Sex and Gender Differences in Pain and Analgesia. Talk presented to the Swiss Laboratory Animal Science Association, Lausanne, Switzerland.
8. **Sorge, R. E.** (2015, November). Sex and Differences in Pain. Talk presented to the Centre Hospitalier Universitaire Vaudois. Lausanne, Switzerland.
9. **Sorge, R. E.** (2014, December). The interaction of diet and pain. Talk presented to the UAB Diabetes Research Center, Birmingham, AL, USA.
10. **Sorge, R. E.** (2014, November). Immune system modulation of pain. Talk presented in the Department of Biology Seminar Series, Samford University, Birmingham, AL, USA.
11. **Sorge, R. E.** (2014, April). Pain recognition in rodents: what it means and how we can use it. Talk presented in the weekly seminar series for the UAB Animal Resource Program, Birmingham, USA.
12. **Sorge, R. E.** (2014, February). Sex differences in immune system modulation of pain in mice. Talk presented at the UAB Pharmacology and Toxicology Workshop, Birmingham, USA.
13. **Sorge, R. E.** (2014, January). Dietary influence on pain in rodents. Talk presented at the UAB Nutrition and Obesity Research Center noon seminar series. Birmingham, USA.
14. **Sorge, R. E.** (2013, September). The role of the inflammasome in pain sensitivity. Talk presented at the UAB Comprehensive Neuroscience Center Retreat. Birmingham, USA.
15. **Sorge, R. E.** (2012, August). Sex differences in spinal mediation of pain: Beyond TLR4. Research presented at International Association for the Study of Pain Special Interest Group on Sex, Gender and Pain meeting, Milan, Italy.
16. **Sorge, R. E.** (2008, November). Slow/low nicotine self-administration in rats: a better model of nicotine's reinforcing effects. Research presented at Canadian Tobacco Control Research Initiative Interdisciplinary Capacity Enhancement team meeting, Montreal, QC, Canada.
17. **Sorge, R. E.** (2008, April). From heroin and cocaine to nicotine: A tour of addictions. Paper presented at the Motivation in the 21st century: brain mechanisms of learning and behavioural change. A symposium in honour of Dr. Jane Stewart. Montreal, QC, Canada.

18. **Sorge, R. E.** & Clarke, P. B. S. (2007, July). Re-examining the standard animal model of tobacco dependence. Research presented at Canadian Tobacco Control Research Initiative Interdisciplinary Capacity Enhancement team meeting, Toronto, ON, Canada.
19. **Sorge, R. E.** & Clarke, P. B. S. (2007, May). Is the standard animal model of tobacco dependence valid? Paper presented at the annual Pharmacology Research Day, Montreal, QC, Canada.
20. **Sorge, R. E.** Stewart, J. & Clarke, P. B. S (2007, February). Intravenous nicotine self-administration in rats – what does it model? Paper presented at the 13th annual meeting of the Society for Research on Nicotine and Tobacco, Austin, TX, USA.
21. **Sorge, R. E.** & Clarke, P. B. S. (2006, July). Nicotine self-administration in rats: exploring the dogma. Research presented at Canadian Tobacco Control Research Initiative Interdisciplinary Capacity Enhancement team meeting, Montreal, QC, Canada.
22. **Sorge, R. E.** & Stewart, J. (2004, March). The Effects of Buprenorphine on Administration of Cocaine and Heroin. Invited lecture at the Center for Studies in Behavioral Neurobiology, Montreal, QC, Canada.
23. **Sorge, R. E.**, Paolone, G. & Stewart, J. (2003, June). The Effects of Buprenorphine on the Administration of Cocaine and Heroin. Paper presented at the 13th Annual Meeting of the Canadian Society for Brain, Behaviour and Cognitive Science, Hamilton, ON, Canada.

### Oral

1. **Sorge, R. E.** & Clarke, P. B. S. (2007, October). A differential role for dopamine in nicotine self-administration that is dependent on infusions speed. Paper presented at the 9th annual meeting of Society for Research on Nicotine and Tobacco Europe, Madrid, Spain.
2. **Sorge, R. E.**, Rajabi, H., & Stewart, J. (2005, July). Buprenorphine suppresses cocaine self-administration due to change in incentive value of the drug. Paper presented at the 15th annual meeting of the Canadian Society for Brain, Behaviour and Cognitive Science, Montreal, QC, Canada.
3. **Sorge, R. E.** & Parker, L. A. (2001, March). Delta-9-THC Interferes with the Establishment of Place Conditioning. Paper presented at the 8th Annual Comparative Cognition Conference, Melbourne, FL, USA.
4. **Sorge, R. E.** & Galef Jr., B. G. (2000, April). The Use of PVC Conduits by Rats of Different Ages and Strains. Paper presented at the Undergraduate Thesis Conference, Guelph, ON, Canada.

### Posters

\* Denotes students under supervision

1. \*Totsch, S. K., \*Meir, R. Y., \*Landis, A. R., Quinn, T. L., & **Sorge, R. E.** (2017, November). *Baclofen and opioid synergism in mice: New insights and potential treatments*. Paper presented at the 47<sup>th</sup> annual meeting of the Society for Neuroscience, Washington, DC.
2. \*Totsch, S. K., \*Lopez, S. A., Quinn, T. L., \*Meir, R. Y., & **Sorge, R. E.** (2017 November). *The SAD weekend: A perilous north American tradition*. Paper presented at the 47th annual meeting of the Society for Neuroscience, Washington, DC.



3. \*Landis, A. R., Meir, R. Y., \*Totsch, S. K., Quinn, T. L., & **Sorge, R. E.** (2017, November). *Baclofen and opioid synergism in mice*. Paper presented at the 52<sup>nd</sup> annual conference of the National Collegiate Honors Council, Atlanta, GA.
4. \*Totsch, S.K., \*Lopez, S.A., Quinn, T.L., \*Meir, R.Y., & **Sorge, R.E.** (2017, May). *The SAD weekend: a perilous North American tradition*. Poster presented at the 36th Annual Scientific Meeting of the American Pain Society, Pittsburgh, PA.
5. \*Meir, R.Y., \*Totsch, S.K., \*Landis, A., Quinn, T.L., & **Sorge, R.E.** (2017, May). *Baclofen and Opioid Synergism in Mice: new insights and potential treatments*. Poster presented at the 36th Annual Scientific Meeting of the American Pain Society, Pittsburgh, PA.
6. \*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.
7. \*Landis, A. R., \*Meir, R. Y., \*Totsch, S. K., \*Sexton, J. D., Quinn, T. L. & **Sorge, R. E.** (2017, April). *Baclofen and opioid synergism in mice*. Paper presented at the 2017 UAB Spring Research Expo, Birmingham, AL.
8. \*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.
9. \*Landis, A. R., \*Meir, R. Y., \*Totsch, S. K., \*Sexton, J. D., Quinn, T. L. & **Sorge, R. E.** (2017, April). *Baclofen and opioid synergism in mice*. Paper presented at the 2017 Ost Research Competition, Birmingham, AL.
10. \*Totsch, S. K., \*Meir, R. Y., Quinn, T. L., \*Lopez, S. A., & **Sorge, R. E.** (2016, November). *An Anti-inflammatory Diet Reverses the Negative Behavioral and Physiological Effects of the Standard American Diet in Male and Female Mice*. Paper presented at ObesityWeek 2016, New Orleans, LA.
11. \*Totsch, S. K., Quinn, T. L. & **Sorge, R. E.** (2016, November). *Sex Differences in the Behavioral and Physiological effects of a Standard American Diet (SAD) in Rats*. Paper presented at ObesityWeek 2016, New Orleans, LA.
12. \*Jones, C. J., \*George, A. P., \*Lukens, S., Morrison, S. L., Soleymani, T., Locher, J. L., Gower, B. A. & **Sorge, R. E.** (2016, November). A low carbohydrate diet reduces pain in older knee osteoarthritis patients. Paper presented at Obesity Week 2016, New Orleans, LA.
13. \*Meir, R.Y., \*Totsch, S. K., \*Landis, A.R., \*Sexton, J. D., Quinn, T. L. & **Sorge R.E.** (2016, April). *Baclofen and opioid synergism in mice*. Paper presented at the 2016 UAB Pain Conference, Birmingham, AL.
14. \*Totsch, S. K., \*Meir, R. Y., Quinn, T. L., \*Lopez, S. A., & **Sorge, R. E.** (2016, November). *An Anti-inflammatory Diet Reverses the Negative Behavioral and Physiological Effects of the Standard American Diet in Male and Female Mice*. Paper presented at the 2016 UAB Pain Conference, Birmingham, AL.
15. \*Jones, C. J., \*George, A. P., \*Lukens, S., Morrison, S. L., Soleymani, T., Locher, J. L., Gower, B. A. & **Sorge, R. E.** (2016, November). A low carbohydrate diet reduces pain in older knee osteoarthritis patients. Paper presented at the 2016 UAB Pain Conference, Birmingham, AL.
16. \*Totsch, S. K., \*Meir, R. Y., Quinn, T. L., \*Lopez, S. A., & **Sorge, R. E.** (2016, September). *An Anti-inflammatory Diet Reverses the Negative Behavioral and Physiological Effects of the Standard American Diet in Male and Female Mice*. Paper presented at the 16th World Congress on Pain for the International Association for the Study of Pain, Yokohama, Japan.

17. Sorge, R. E., \*Totsch, S. K., & Quinn, T. L. (2016, September). *Sex Differences in the Behavioral and Physiological effects of a Standard American Diet (SAD) in Rats*. Paper presented at the 16th World Congress on Pain for the International Association for the Study of Pain, Yokohama, Japan
18. Sorge, R. E. (2016, July). *Immune system modulation of pain via diet*. Paper presented at the Rita Allen Scholars Meeting, Palo Alto, CA, USA.
19. \*Totsch, S. K., \*Meir, R. Y., Quinn, T. L., \*Lopez, S. A., & Sorge R. E. (2016, May). *Effects of a Suboptimal American Diet and an Anti-inflammatory Diet on Behavioral and Physiological Measures of Pain in Male and Female Mice*. Paper presented at the 35th meeting of the American Pain Society, Austin, TX.
20. \*Waite, M. E., \*Totsch, S. K., Quinn, T. L., \*Tomkovich, A., \*Schumann, A. P., \*Miller, K. L., Cowell, R. M., & Sorge R. E. (2016, May). *Sex Differences in the Impact of the Suboptimal American Diet in Rats: Effects on Behavior, Physiology and Recovery*. Paper presented at the 35th meeting of the American Pain Society, Austin, TX.
21. **Sorge, R. E.**, \*Totsch, S. K., \*Landis, A., \*Meir, R. Y., & Quinn, T. L. (2016, May). *Baclofen and opioid synergism in mice*. Paper presented at the 35th meeting of the American Pain Society, Austin, TX.
22. \*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.
23. \*Meir, R.Y., \*Landis, A.R., \*Totsch, S.K. & **Sorge R.E.** (2016, April). *Synergistic effects between baclofen and opioids in mice*. Paper presented at the 2016 Ost Research Competition, Birmingham, AL.
24. \*Weikard, J., \*Totsch, S.K., Quinn, T.L. & **Sorge, R.E.** (2016, April). *Development and validation of a novel fibromyalgia model in mice*. Paper presented at the 2016 Ost Research Competition, Birmingham, AL.
25. \*George, A.P., \*Lukens, S. \*Jones, C.D., Morrison, S., Soleymani, T, Gower, B.A. & **Sorge, R.E.** (2016, April). *Diet interventions to reduce inflammation and pain in older adults with knee osteoarthritis*. Paper presented at the 2016 Ost Research Competition, Birmingham, AL.
26. \*Meir, R.Y., \*Landis, A.R., \*Totsch, S.K. & **Sorge R.E.** (2016, April). *Synergistic effects between baclofen and opioids in mice*. Paper presented at the 2016 UAB Spring Research Expo, Birmingham, AL.
27. \*Weikard, J., \*Totsch, S.K., Quinn, T.L. & **Sorge, R.E.** (2016, April). *Development and validation of a novel fibromyalgia model in mice*. Paper presented at the 2016 UAB Spring Research Expo, Birmingham, AL.
28. \*George, A.P., \*Lukens, S. \*Jones, C.D., Morrison, S., Soleymani, T, Gower, B.A. & **Sorge, R.E.** (2016, April). *Diet interventions to reduce inflammation and pain in older adults with knee osteoarthritis*. Paper presented at the 2016 UAB Spring Research Expo, Birmingham, AL.
29. **Sorge, R. E.**, \*Totsch, S. K., \*Waite, M. E. & Quinn, T. L. (2015, May). *Baclofen enhances opioid analgesia and reward in rodents*. Paper presented at the 34<sup>th</sup> meeting of the American Pain Society, Palm Springs, USA.

30. \*Totsch, S. K., \*Waite, M. E., \*Tomkovich, A., Quinn, T., & **Sorge R. E.** (2015, May). *Behavioral and physiological effect of poor diet in mice.* Paper presented at the 34<sup>th</sup> meeting of the American Pain Society, Palm Springs, USA.
31. \*Waite, M. E., \*Totsch, S. K., Quinn, T., \*Tomkovich, A., \*Schumann, A. P., & **Sorge, R. E.** (2015, May). *Behavioral and physiological effects of a new Sub-Optimal American Diet (SAD) in rats.* Paper presented at the 34th meeting of the American Pain Society, Palm Springs, USA.
32. \*Schumann, A. P. & **Sorge, R. E.** (2014, Oct). *Innate immune system involvement in analgesia and drug reward.* Paper presented at the 15th World Congress on Pain of the International Association for the Study of Pain, Buenos Aires, Argentina.
33. \*Schumann, A. P. & **Sorge, R. E.** (2014, May). *Innate immune system involvement in analgesia and drug reward.* Paper presented at the 33rd annual meeting of the American Pain Society, Tampa, FL, USA.
34. \*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.
35. \*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.
36. \*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 7<sup>th</sup> UAB EXPO, Birmingham, USA
37. **Sorge, R. E.**, Mapplebeck, J. C. S., Martin, L. J., Alexander, J., Beggs, S., Rosen, S., Zhang, J., Salter, M. W., & Mogil, J. S. (2013, November). *Male and female mice use distinct spinal immune cells to mediate chronic pain.* Paper presented at the 43<sup>rd</sup> annual meeting for the Society for Neuroscience, San Diego, CA, USA.
38. \*Schumann, A. P., \*Tomkovich, A., \*Dewberry, 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.
39. \*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.
40. Mogil, J. S., **Sorge, R. E.**, Martin, L. J., Isbester, K. A. & Sternberg, W. F. (2012, October). *Androstadienone-related stress-induced analgesia in the mouse via exposure to males.* Paper presented at the 42<sup>nd</sup> annual meeting for the Society for Neuroscience, New Orleans, LA, USA.
41. **Sorge, R. E.**, Labbe, K., Saleh, M. & Mogil, J. S. (2012, October). *Cellular inhibitors of apoptosis proteins (cIAPs) play a role in sensitivity to noxious stimulation in mice in the absence of inflammation.* Paper presented at the 42<sup>nd</sup> annual meeting for the Society for Neuroscience, New Orleans, LA, USA.
42. Khoutorsky, A., Gkogkas, C., **Sorge, R. E.**, Mogil, J. S., Nader, K., Lacaille, J. C. & Sonenberg, N. (2012, October). *Control of synaptic plasticity and memory via suppression of poly(A)-binding protein.* Paper presented at the 42<sup>nd</sup> annual meeting for the Society for Neuroscience, New Orleans, LA, USA.
43. **Sorge, R. E.**, Martin, L. J., Isbester, K. A., Chabot-Dore, A.-J., Stone, L. S. & Mogil, J. S. (2012, August). *MACHO: Male-induced analgesia by chemosensory olfaction.* Paper presented at the 14<sup>th</sup> World Congress on Pain, Milan, Italy.
44. **Sorge, R. E.**, Khoutorsky, A., Sonenberg, N. & Mogil, J. S. (2011, November). *Alterations in translational regulation play a key role in thermal pain sensitivity in mice.*

Paper presented at the 41<sup>st</sup> annual meeting for the Society for Neuroscience, Washington DC, USA.

45. Martin, L. J., **Sorge, R. E.**, Austin, J. S., Smith, S. B., Maixner, W., Diatchenko, L., & Mogil, J. S. (2011, November). *Modulation of nociceptive sensitivity in inflammatory and neuropathic pain by the epidermal growth factor receptor*. Paper presented at the 41<sup>st</sup> annual meeting for the Society for Neuroscience, Washington DC, USA.
46. Tuttle, A. H., Sotocinal, S. G., **Sorge, R. E.**, Zaloum, A., Martin, L. J., Wieskopf, J. S., Mapplebeck, J. C. S., Wei, P., Zhan, S., Zhang, S., McDougall, J. J., King, O. D., & Mogil, J. S. (2011, November). *The rat grimace scale: a partially automated method for quantifying pain in the laboratory rat via facial expressions*. Paper presented at the 41<sup>st</sup> annual meeting for the Society for Neuroscience, Washington DC, USA.
47. Wieskopf, J. S., Austin, J. S., Slepian, P., **Sorge, R. E.**, Su, A., Mathur, J., Uzzell, V., Janes, J., McIntosh, J., Maskos, U., Changeux, J. P., Devor, M., Lester, H., Belfer, I., Diatchenko, L., Patapoutian, A., & Mogil, J. S. (2011, November). *The role of chrna6 in chronic pain*. Paper presented at the 41<sup>st</sup> annual meeting for the Society for Neuroscience, Washington DC, USA.
48. Mapplebeck, J. C. S., Tabaka, J. M., Sotocinal, S. G., **Sorge, R. E.**, & Mogil, J. S. (2011, November). *Dissociation of facial expression-based spontaneous pain quantification from other measures of pain in mice*. Paper presented at the 41<sup>st</sup> annual meeting for the Society for Neuroscience, Washington DC, USA.
49. **Sorge, R. E.**, Khoutorsky, A., Sonenberg, N. & Mogil, J. S. (2011, June). *Alterations in translational regulation play a key role in thermal pain sensitivity in mice*. Paper presented at the Joint Annual Scientific Meeting of the Canadian Pain Society and the British Pain Society, Edinburgh, Scotland, UK.
50. **Sorge, R. E.**, LaCroix-Fralish, M. L., Tuttle, A. H., Sotocinal, S., Topham, L., Beggs, S., Trang, T., Salter, M. W., & Mogil, J. S. (2011, January). *Sex differences in spinal TLR4-mediation of neuropathic pain in mice*. Paper presented at the 15<sup>th</sup> annual McGill Pain Day, Montreal, QC, Canada.
51. Malfait, A. M., Seymour, A., Valdes, A. M., Das, R., Tortorella, M., Arden, N. K., Vaughn, F. L., Leaverton, P. E., Hart, D. J., **Sorge, R. E.**, Sotocinal, S. G., Schorscher-Petcu, A., & Mogil, J. S. (2010, November). *A role for PACE4 in pain in mice and humans: pain phenotype of a PACE4 null mutant and genetic association with knee osteoarthritis pain*. Paper presented at the 74<sup>th</sup> annual meeting of the American College of Rheumatology, Atlanta, GA, USA.
52. **Sorge, R. E.**, LaCroix-Fralish, M. L., Bailey, A. L., Sotocinal, S. G., Ritchie, J., Austin, J.S., Liu, H., Labialle, S., Yang, L., Shi, Y., Naumova, A. K., & Mogil, J. S. (2010, November). *The Yin and Yang of pain: fine mapping of the Yin-Yang 1 transcription factor gene's effect on formalin test pain behaviour and morphine analgesia*. Paper presented at the 40<sup>th</sup> annual meeting of the Society for Neuroscience, San Diego, CA, USA.
53. **Sorge, R. E.**, LaCroix-Fralish, M. L., Sotocinal, S. G., Ritchie, J., Austin, J-S., Liu, H., Labialle, S., Yang, L., Shi, Y., Naumova, A. K. & Mogil, J. S. (2010, September). *The Yin and Yang of pain: fine mapping of the Yin-Yang 1 transcription factor gene's effect on formalin test pain behaviour and morphine analgesia*. Paper presented at the 13<sup>th</sup> world congress of the International Association for the Study of Pain, Montreal, QC, Canada.
54. Mogil, J. S., **Sorge, R. E.**, Beggs, S., LaCroix-Fralish, M. L., Sotocinal, S. G., Trang, T. & Salter, M. W. (2010, September). *Sex differences in the reduced allodynia displayed by C3H/HeJ mice: a tlr4-independent pathway in female mice?* Paper presented at the 13<sup>th</sup> world congress of the International Association for the Study of Pain, Montreal, QC, Canada.

55. **Sorge, R. E.** & Clarke, P. B. S. (2010, February). *Self-administration of the tobacco constituents norharman and nicotine alone and in combination*. Paper presented at the 16<sup>th</sup> annual meeting of the Society for Research on Nicotine and Tobacco, Baltimore, MD, USA.
56. **Sorge, R. E.** & Clarke, P. B. S. (2009, October). *Differential effects of chronic versus acute administration of monoamine oxidase inhibitors on nicotine self-administration in rats*. Paper presented at the 39<sup>th</sup> annual meeting of the Society for Neuroscience, Chicago, USA
57. **Sorge, R. E.** & Clarke, P. B. S. (2008, February). *Dopamine D2, but not D1, receptors contribute to differences in our new model of nicotine self-administration in rats*. Paper presented at the 14<sup>th</sup> annual meeting of the Society for Research on Nicotine and Tobacco, Portland, OR, USA.
58. Baharnouri, G, **Sorge, R. E.** & Clarke, P. B. S. (2008, February). *Limited effectiveness of monoamine oxidase inhibitors on established nicotine self-administration in rats*. Paper presented at the 14<sup>th</sup> annual meeting of the Society for Research on Nicotine and Tobacco, Portland, OR, USA.
59. **Sorge, R. E.**, & Clarke, P. B. S. (2007, November). *Slow/low intravenous infusions of nicotine in rats: a better model of smoking?* Poster presented at the 37<sup>th</sup> annual meeting of the Society for Neuroscience, San Diego, CA, USA.
60. Chehayeb, D., **Sorge, R. E.**, Franklin, K. B., & Clarke, P. B. S. (2007, November). *Ultrasonic vocalizations and psychomotor stimulant reward in adult rats*. Poster presented at the 37<sup>th</sup> annual meeting of the Society for Neuroscience, San Diego, CA, USA.
61. **Sorge, R. E.**, Stewart, J. & Clarke, P. B. S. (2006, November). *Effect of infusion duration on intake during nicotine self-administration in rats: rapid infusions are not necessary*. Poster presented at the 36<sup>th</sup> annual meeting of the Society for Neuroscience, Atlanta, GA, USA
62. **Sorge, R. E.**, Rajabi, H. & Stewart, J. (2005, November). *Chronic buprenorphine suppresses cocaine self-administration on both fixed ratio and progressive ratio schedules of reinforcement*. Poster presented at the 35<sup>th</sup> annual meeting of the Society for Neuroscience, Washington, DC, USA.
63. Stewart, J., **Sorge, R. E.**, Rajabi, H. & Klein, H. (2005, November). *The effects of chronic buprenorphine in rats on responses to acute injections of cocaine and heroin across time*. Poster presented at the 35<sup>th</sup> annual meeting of the Society for Neuroscience, Washington, DC, USA.
64. Hood, S. J., **Sorge, R. E.** & Stewart, J. (2005, November). *Chronic buprenorphine suppresses sucrose intake on an FR1 schedule, but does not affect responding on FR5 or progressive ratio schedule*. Poster presented at the 35<sup>th</sup> annual meeting of the Society for Neuroscience, Washington, DC, USA.
65. **Sorge, R. E.**, Hood, S., & Stewart, J. (2005, July). *Chronic buprenorphine reduces both heroin- and cocaine-seeking in tests of extinction and drug-induced reinstatement, but not following stress*. Poster session presented at the 28<sup>th</sup> annual meeting of the Canadian College for Neuropsychopharmacology, St. John's, NF, Canada.
66. Hood, S., **Sorge, R. E.**, & Stewart, J. (2005, July). *Buprenorphine treatment alters sucrose reinforcement*. Poster session presented at the 15<sup>th</sup> annual meeting of the Canadian Society for Brain Behaviour and Cognitive Science, Montreal, QC, Canada.
67. **Sorge, R. E.**, Rajabi, H. & Stewart, J. (2004, November). *Methadone or buprenorphine maintenance attenuates the heroin-induced rise in nucleus accumbens dopamine, but potentiates the cocaine-induced rise*. Poster session presented at the 7<sup>th</sup> annual Chemistry and Biochemistry Graduate Research Conference, Montreal, QC, Canada.

68. **Sorge, R. E.**, Rajabi, H. & Stewart, J. (2004, October). *Maintenance on methadone or buprenorphine attenuates the heroin-induced rise in nucleus accumbens dopamine, but potentiates the cocaine-induced rise*. Poster session presented at the 34<sup>th</sup> annual meeting of the Society for Neuroscience, San Diego, CA, USA.
69. Caruana, D. A., **Sorge, R. E.**, Hanck, J. J., Harbour, V. L., Stewart, J., and Chapman, C. A. (2004, October) *Dopaminergic modulation of glutamate-mediated synaptic transmission in layer II of the lateral entorhinal cortex in vivo*. Poster session presented at the 34<sup>th</sup> annual meeting of the Society for Neuroscience, San Diego, CA, USA.
70. **Sorge, R. E.**, Rajabi, H., Campbell, L., Quinlan-Davidson, M. & Stewart, J. (2004, July). *Buprenorphine, a mixed opioid agonist-antagonist, attenuates the rise in nucleus accumbens dopamine following heroin, but potentiates the rise in dopamine following cocaine*. Poster session presented at the 27<sup>th</sup> Annual Meeting of the Canadian College for Neuropsychopharmacology, Kingston, ON, Canada.
71. **Sorge, R. E.**, Paolone, G., Zannetos, T. & Stewart, J. (2004, February). *The Opioid Agonist-Antagonist, Buprenorphine, Preferentially Suppresses Cocaine Self-Administration in Rats Trained to Self-Administer Both Heroin and Cocaine*. Poster session presented at the Concordia University Research Day, Montreal, QC, Canada.
72. **Sorge, R. E.**, Campbell, L., Quinlan-Davidson, M., Rajabi, H. & Stewart, J. (2004, February). *The Effects of Buprenorphine on Extracellular Levels of Dopamine in the Nucleus Accumbens in Response to Cocaine and Heroin*. Poster session presented at the Concordia University Research Day, Montreal, QC, Canada.
73. **Sorge, R. E.**, Leri, F., Paolone, G., Tremblay, A., Jenkins, P., Rajabi, H. & Stewart, J. (2003, October). *The Effects of Buprenorphine and Methadone on Reinstatement and Self-Administration of Cocaine and Heroin*. Poster session presented at the 20<sup>th</sup> Anniversary of the Center for Studies in Behavioral Neurobiology, Montreal, QC, Canada.
74. **Sorge, R. E.**, Jenkins, P. Paolone, G. & Stewart, J. (2003, November). *Effect of Amount of Exposure to Cocaine Self-Administration and Time Since Termination of Drug Taking on Relapse to Drug Seeking Assessed in Extinction and Following Acute Footshock Stress*. Poster session presented at the 33<sup>rd</sup> Annual Conference for the Society for Neuroscience, New Orleans, LA, USA.
75. Stewart, J., **Sorge, R. E.**, Leri, F. & Paolone G. (2003, November). *The Opioid Agonist-Antagonist, Buprenorphine, Preferentially Suppresses Cocaine Self-Administration Over Heroin in Rats Trained to Self-Administer Both Drugs*. Poster session presented at the 33<sup>rd</sup> Annual Conference for the Society for Neuroscience, New Orleans, LA, USA.
76. Leri, F., Tremblay, A., **Sorge, R. E.**, Paolone, G., Goddard, B. & Stewart, J. (2003, November). *Effects of Methadone Maintenance on Cocaine-Motivated Behaviors*. Poster session presented at the 33<sup>rd</sup> Annual Conference for the Society for Neuroscience, New Orleans, LA, USA
77. **Sorge, R. E.** & Parker, L. A. (2001, November). *Delta-9-Tetrahydrocannabinol Interferes with Learning in the Place Conditioning Paradigm*. Poster session presented at the 31<sup>st</sup> Annual Conference for the Society for Neuroscience, San Diego, CA, USA.

## Professional Memberships

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- International Association for the Study of Pain (IASP)
- American Pain Society (APS)
- Canadian Pain Society (CPS)
- Society for Neuroscience (SfN)
- American Association for Laboratory Animal Science (AALAS)

## Professional Activities

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### Graduate Student Mentorship

Name	Program	Role	Year
Stacie Totsch	Behavioral Neuroscience	Primary Mentor	2014-Present
Larissa Strath	Behavioral Neuroscience	Primary Mentor	2017-Present
Chris Taylor	Biology	Thesis Committee	Current
Mary Latimer	Biology	Thesis Committee	Current
Amanda Aponte	Graduate Biomedical Sci	Thesis Committee	Current
Rachel Orlandella	Graduate Biomedical Sci	Thesis Committee	Current
Katherine Henley	Graduate Biomedical Sci	Thesis Committee	Current
Jodi Paul	Behavioral Neuroscience	Thesis Committee	Defended 2015
Chelsea Ball	Behavioral Neuroscience	Thesis Committee	Defended 2014
Samuel Duesman	Behavioral Neuroscience	Rotation Mentor	Fall 2016
Yue Zhang	Behavioral Neuroscience	Rotation Mentor	Fall 2015
Kiara Miller	Graduate Biomedical Sci	Rotation Mentor	Fall 2015

### Undergraduate Student Mentorship

Name	Program	Role	Year
Remy Meir	Neurobiology	Primary Mentor	Current
Aaron Landis	Psychology	Primary Mentor	Current
Alan George	Sci-Tech Honors	Primary Mentor	Current
Shannon Lukens	Sci-Tech Honors	Primary Mentor	Current
Erin Ross	Sci-Tech Honors	Primary Mentor	Current
Salvador Lopez	Psychology	Primary Mentor	Completed 2017
Savannah Dewberry	Sci-Tech Honors	Primary Mentor	Defended 2016
Ashleigh Tomkovich	Sci-Tech Honors	Primary Mentor	Defended 2015
Alan Schumann	Sci-Tech Honors	Primary Mentor	Defended 2015
Catherine Jones	Psychology	Primary Mentor	Defended 2014

### Courses Taught As Coursemaster

	Term	Year	Enrollment
PY 253 – Brain, Mind and Behavior	Spring	2013	80
PY 253 – Brain, Mind and Behavior	Spring	2014	76
PY 253 – Brain, Mind and Behavior	Spring	2015	97
PY 253 – Brain, Mind and Behavior	Fall	2016	98
PY 390 – Animal Behavior	Fall	2013	39
PY 390 – Animal Behavior	Fall	2014	46
PY 390 – Animal Behavior	Fall	2015	48
PY 390 – Animal Behavior	Fall	2016	46
PY 431/787 – Dynamics of Pain	Spring	2013	5
PY 431/787 – Dynamics of Pain	Spring	2014	19
PY 431/787 – Dynamics of Pain	Spring	2015	24
PY 431/787 – Dynamics of Pain	Spring	2016	35
PY 431/787 – Dynamics of Pain	Spring	2017	40

### Contributed lectures

PY 753 - Fundamentals of Behavioral Neuroscience (Fall, 2012), 5 lectures

PY 753 - Fundamentals of Behavioral Neuroscience (Fall, 2013), 2 lectures  
PY 753 - Fundamentals of Behavioral Neuroscience (Fall, 2015), 2 lectures  
PY 793 – Methods in Behavioral Neuroscience (Spring, 2015), 1 lecture

#### **Ad-hoc Reviewer**

- Pain
- European Journal of Pain
- Addictive Behaviors
- New England Journal of Medicine
- BMC Cancer
- PLOS One
- Psychopharmacology
- Pharmacology, Biochemistry and Behaviour
- Neuroscience
- Planta Medica
- Scandinavian Journal of Lab Animal Science
- Science Reports
- Physiology & Behavior

#### **On-Campus Affiliations**

- Nutrition and Obesity Research Center (NORC)
- Diabetes Research Center (DRC)
- Comprehensive Neuroscience Center (CNC)
- Graduate Biomedical Sciences (GBS)
- Behavioral Neuroscience Core Faculty (Psychology)
- Center for Palliative and Supportive Care
- Vision Science Research Center

### **Community Outreach and Involvement**

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#### **Invited Talks**

- Neuroscience Café, Five Points West Public Library, Birmingham, AL, 2017
- Neuroscience Café, Hoover Public Library, Hoover AL, 2016
- Neuroscience Café, Homewood Public Library, Homewood AL, 2016
- Civitan North District Business Meeting, Hanceville AL, 2016

#### **Community Activities**

- Tee ball Coach, Homewood Joy League, Homewood, AL, 2014, 2015