

CURRICULUM VITAE
NATHAN L. SPARKMAN, PH.D.

OFFICE

DEPARTMENT OF PSYCHOLOGY
Stephen F Austin State University
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POSITIONS

Associate Professor (Sept, 2020-present)
Department of Psychology
Stephen F Austin State University, Nacogdoches, TX

Assistant Professor (Aug, 2014-Sept, 2020)
Department of Psychology
Stephen F Austin State University, Nacogdoches, TX

Visiting Assistant Professor/Lecturer (Aug, 2012-July, 2014)
Counseling, Psychology and Social Work Department
Chadron State College, Chadron, NE

Research Assistant Professor – (Aug, 2010-July, 2012)
Department of Psychology
University of Nebraska, Lincoln, NE

Visiting Assistant Professor (Aug, 2009-July, 2010)
Laboratory of Integrative Immunology and Behavior,
University of Illinois, Urbana-Champaign, IL

EDUCATION & TRAINING

Postdoctoral Research Associate (Aug, 2004-Aug, 2009)
Laboratory of Integrative Immunology and Behavior,
University of Illinois, Urbana-Champaign, IL
Rodney W. Johnson, Ph.D. – Principal Investigator

Doctor of Philosophy, Experimental Psychology: Behavioral Neuroscience, 2004
Texas Christian University, Fort Worth, TX
Gary W. Boehm, Ph.D. - advisor

Master of Science, Experimental Psychology: Behavioral Neuroscience, 2002
Texas Christian University, Fort Worth, TX
Gary W. Boehm, Ph.D. - advisor

Bachelor of Arts, Psychology, 1998 (*cum laude*)
(Biology Minor)
University of Texas, Arlington, TX

FORMAL TEACHING EXPERIENCE

INSTRUCTOR (GROUPED BY AREA)

Research Methods and Statistics

- Research Design (PSYC 3441), Fall 2020, SFASU (writing emphasis)
- Research Design (PSYC 341), Spring 2020, SFASU (writing emphasis)
- Research Design (PSYC 341), Fall 2019, SFASU (writing emphasis)
- Research Design (PSYC 341), Spring 2019, SFASU (writing emphasis)
- Advanced Research Design (PSYC 585), Fall 2018, SFASU (graduate course)
- Research Design (PSYC 341), Fall 2018, SFASU (writing emphasis)
- Research Design (PSYC 341), Spring 2017, SFASU (writing emphasis)
- Advanced Research Design (PSYC 585), Fall 2016, SFASU (graduate course)
- Research Design (PSYC 341), Fall 2016, SFASU (writing emphasis)
- Research Design (PSYC 341), Spring 2016, SFASU (writing emphasis)
- Research Design (PSYC 341), Fall 2015, SFASU (writing emphasis)
- Research Design (PSYC 341), Spring 2015, SFASU (writing emphasis)
- Research Design (PSYC 341), Fall 2014, SFASU (writing emphasis)
- Advanced Behavioral Statistics (PSYC 438/538), Spring 2014, CSC (UG/G sections)
- Research Methods and Design (PSYC 432), Spring 2014, CSC (2 sections)
- Advanced Behavioral Statistics (PSYC 438/538), Spring 2013, CSC (UG/G sections)
- Research Methods and Design (PSYC 432), Spring 2012, CSC (2 sections)
- Intro to Research Methods and Statistics (PSYC242), Fall 2012, CSC (2 sections)

Behavioral Neuroscience/Psychopharmacology

- Biopsychology (PSYC 2330), Fall 2020, SFASU
- Biopsychology (PSYC 350), Spring 2020, SFASU
- Biopsychology (PSYC 350), Fall 2019, SFASU
- Biopsychology (PSYC 350), Spring 2019, SFASU
- Biopsychology (PSYC 350), Fall 2018, SFASU
- Biopsychology (PSYC 504), Spring 2018, SFASU (graduate course)
- Drugs and Behavior (PSYC 498), Fall 2018, SFASU
- Biopsychology (PSYC 350), Summer 2018, SFASU
- Biopsychology (PSYC 350), Spring 2017, SFASU
- Biopsychology (PSYC 504), Spring 2016, SFASU (graduate course)
- Biopsychology (PSYC 350), Fall 2015, SFASU
- Biopsychology (PSYC 350), Spring 2015, SFASU
- Biopsychology (PSYC 350), Fall 2014, SFASU
- Physiological Psychology (PSYC430), Fall 2013, CSC
- Psychoneuropharmacology (Psych 464), Spring 2012, University of Nebraska
- Behavioral Neuroscience (Psych 465/865), Spring 2012, University of Nebraska
- Behavioral Neuroscience (Psych 465/865), Summer II-2011, University of Nebraska

Development

- Lifespan and Development (PSY376), Summer I 2016, SFASU
- Lifespan and Development (PSY376), Summer I 2015, SFASU
- Developmental Psychology (PSYC334), Summer I 2014, CSC
- Developmental Psychology (PSYC334), Fall 2013, CSC
- Human Development, Spring 2004; Tarrant County College

Social

- Social Psychology (PSYC331), Summer I, 2014, CSC
- Social Psychology (PSYC331), Fall 2013, CSC (2 sections)
- Social Psychology (PSYC331), Summer I, 2013, CSC
- Social Psychology (PSYC331), Fall 2012, CSC (2 sections)
- Human Relations, Spring 2004; Tarrant County College

Learning & Behavior

- Learning and Conditioning (PSY361), SFASU
- Domestic Animal Behavior [Lab], Fall 2007, University of Illinois Urbana-Champaign
- Principles of Learning [Lab], Spring 2002, Texas Christian University (writing emphasis)

General/Misc

- Introduction to Psychology (PSYC133), Spring 2020, SFASU
- Introduction to Psychology (PSYC133), Spring 2019, SFASU
- Introduction to Psychology (PSYC133), Spring 2017, SFASU (2 sections)
- Introduction to Psychology (PSYC133), Fall 2016, SFASU
- Internship in Psychology (PSY409), SUM 2016, SFASU (practicum)
- Introduction to Psychology (PSYC133), Fall 2015, SFASU (2 sections)
- Introduction to Psychology (PSYC133), Spring 2015, SFASU
- Introduction to Psychology (PSYC133), Fall 2014, SFASU
- Educational Psychology (PSYC231), Summer I, 2013, CSC

PEER REVIEWED PUBLICATIONS

Higa, J.J., Moreno, S. & **Sparkman, N. L.** (2002). Interval timing in rats: tracking unsignaled changes in the fixed interval schedule requirement. *Behavioural Processes*, 58, 167-176.

Sparkman, N.L., Calvert, W.S. Martin, L.A. & Boehm, G.W. (2005). Effects of intraperitoneal lipopolysaccharide on Morris water maze learning in year-old and two month old female C57BL/6J mice. *Behavioural Brain Research*, 159, 149-151.

Sparkman NL, Kohman RA, Garcia AK, Boehm GW. (2005). Peripheral lipopolysaccharide administration impairs two-way active avoidance conditioning in C57BL/6J mice. *Physiology and Behavior*, 85, 278-288.

Sparkman N.L., Kohman R.A., Scott V.J., Boehm G.W. (2005). Bacterial endotoxin-induced behavioral alterations in two variations of the Morris water maze. *Physiology and Behavior*, 86, 244-251.

Sparkman, N.L., Buchanan, J.B., Heyen, J.R.R., Chen, J., Beverly, J.L., & Johnson, R.W. (2006) Interleukin-6 facilitates lipopolysaccharide-induced disruption in working memory and

expression of other proinflammatory cytokines in hippocampal neuronal cell layers. *Journal of Neuroscience*, 26:10709-10716.

Kohman, R.A., Tarr, A.J., **Sparkman, N.L.**, Day, C.E., Paquet, A., Akkaraju, G.R., & Boehm, G.W. (2007). Alleviation of the effects of endotoxin exposure on behavior and hippocampal IL-1 β by a selective non-peptide antagonist of corticotropin-releasing factor receptors. *Brain, Behavior and Immunity*, 21: 824-835.

Godbout, J.P., Moreau, M., Lestage, J., Chen, J., **Sparkman, N.L.**, O'Connor, J., Castanon, N., Kelley, K.W., Dantzer, R., and Johnson R. W. (2007) Aging exacerbates depressive like-behavior in mice in response to activation of the peripheral innate immune system. *Neuropsychopharmacology*, 33:2341-51

Chen, J., Buchanan, J.B., **Sparkman, N.L.**, Godbout, J.P., Freund, G.G. & Johnson, R.W. (2008) Neuroinflammation and disruption in working memory in aged mice after acute stimulation of the peripheral innate immune system. *Brain, Behavior and Immunity*, 22:301-11.

Buchanan, J.B., **Sparkman, N.L.**, & Johnson, R.W. (2008) Mild repeated stress exacerbates neuroinflammation and prolongs disruption of spatial working memory in aged vs. adult mice. *Psychoneuroendocrinology*, 31:755-65.

Rosczyk, H.A., **Sparkman, N.L.** & Johnson, R.W. (2008) Neuroinflammation and cognitive function in aged mice following minor surgery. *Experimental Gerontology*, 43:840-6.

Kohman, R.A., Tarr, A.J., **Sparkman, N.L.**, Bogale, T.M.H., & Boehm, G.W. (2008) Neonatal endotoxin exposure impairs avoidance learning and attenuates endotoxin-induced sickness behavior and central IL-1 β gene transcription in adulthood. *Physiology and Behavior*, 194:25-31.

Krzyszton CP, **Sparkman NL**, Grant RW, Buchanan JB, Broussard SR, Woods JA, Johnson RW. (2008) Exacerbated fatigue and motor deficits in interleukin-10 deficient mice after peripheral immune stimulation. *American Journal of Physiology Regulatory, Integrative & Comparative Physiology*, 295:R1109-14.

Sparkman, N.L. & Johnson, R.W. (2008) Neuroinflammation associated with aging sensitizes the brain to the effects of infection or stress. *Neuroimmunomodulation*, 15(4-6):323-330. Review.

Richwine, A.F., **Sparkman, N.L.**, Buchanan, J.B., Dilger, R.N., Johnson, R.W. (2009) Cognitive deficits in interleukin-10-deficient mice after peripheral injection of lipopolysaccharide. *Brain, Behavior and Immunity*, 23(6):794-802

Buchanan, J.B., **Sparkman, N.L.**, Johnson, R.W. (2010) Methamphetamine sensitization attenuates the febrile and neuroinflammatory response to a subsequent peripheral immune stimulus. *Brain, Behavior and Immunity*. 24(3):502-11.

Buchanan, J.B., **Sparkman, N.L.**, Johnson, R.W. (2010) A neurotoxic regimen of methamphetamine exacerbates the febrile and neuroinflammatory response to a subsequent peripheral immune stimulus. *J Neuroinflammation* 22;7:82.

Burton, M.D., **Sparkman, N.L.**, Johnson, R.W. (2011) Inhibition of interleukin-6 trans-signaling in the brain facilitates recovery from lipopolysaccharide-induced sickness behavior. *Journal of Neuroinflammation*. 8: 54.

Sparkman, N.L. & Li, M. (2012) Drug-drug conditioning between citalopram and haloperidol or olanzapine in a conditioned avoidance response model: implications for polypharmacy in schizophrenia. *Behavioral Pharmacology*, ;23(7):658-68.

Feng, M., **Sparkman, N.L.** & Li, M. (2016) A drug-drug conditioning paradigm reveals multiple antipsychotic-nicotine interactions. *The Journal of Psychopharmacology*.

Sanchez, E, Garcia, S. & **Sparkman, N.L.** (submitted) Impulsivity and Health Promotion.

Rice, M, Estrada, E. & **Sparkman, N.L.** (submitted) Outdoor activity types predict connection to nature.

Sparkman, N.L. & Polewan, R.J. (in prep) Norepinephrine modulates phototactic and photophobic behavior in daphnia.

POSTERS & PRESENTATIONS

Rice, M., Middlebrook, S., Pearte, C., & **Sparkman, N. L.** (April 2019) *Schizotypy and health-promotion: The mediating role of depressive symptoms*. Southwestern Psychological Association, Albuquerque, NM

Sanchez, E. & **Sparkman, N. L.**, (April 2019) *Influence of stereotyping and prejudices on perceptions of superheroes*. Southwestern Psychological Association, Albuquerque, NM

McMillion, A., Garcia, S., & **Sparkman, N. L.**, (April 2019) *Helicopter parenting is not correlated with body dissatisfaction or self-esteem*, Southwestern Comparative Behavioral Neuroscience Association, Albuquerque, NM

Dumas, B., Knoerzer, S., Miles, K., & **Sparkman, N. L.**, (April 2019) . *Locus of control, fear of negative evaluation and social anxiety*, Southwestern Psychological Association, Albuquerque, NM

Chek, C., Lowe, J. & **Sparkman, N. L.**, (April 2019) *Helicopter parenting is not correlated with body dissatisfaction or self-esteem*, Southwestern Psychological Association, Albuquerque, NM

Custard, M, Holems, H., Machann, A., Payne, S., Shields, S., & **Sparkman, N. L.**, (April 2019) *The effect of the presence of dogs on prejudice*, Southwestern Psychological Association, Albuquerque, NM

- Epperson, K., Nguyen, T. & **Sparkman, N. L.**, (April 2019) *The relationship between entitlement, empathy, and forgiveness*, Southwestern Psychological Association, Albuquerque, NM
- Khaleghi, N., Rice, M., Sanchez, E., Thomas, T. & **Sparkman, N. L.**, (April, 2018) *The Impact of Cleanliness on Conservatism*, Southwestern Psychological Association, Houston, TX
- Garcia, S., Sanchez, E. & **Sparkman, N. L.**, (April, 2018) *The Relationship between Impulsivity and Health-Related Behaviors*, Southwestern Psychological Association, Houston, TX
- Shields, S., Payne, S., & **Sparkman, N. L.**, (April, 2018) *Effects of Female Personality, Locus of Control and Social Desirability on Infidelity*, Southwestern Psychological Association, Houston, TX
- Custard, M., Holmes, H., Machan, A. & **Sparkman, N. L.**, (April, 2018) *Female Gamers: Does Personality and Self-Esteem Predict Video Game Genre Preference?*, Southwestern Psychological Association, Houston, TX
- Rice, M. & **Sparkman, N. L.**, (April, 2018) *Outdoor Activities and the Relationship to Connection to Nature*, Southwestern Psychological Association, Houston, TX
- Kunz, J. & **Sparkman, N. L.**, (April, 2018) *Health Locus of Control, Stress and Academic Success*, Southwestern Psychological Association, Houston, TX
- Dietert, M. J., Brewer, L. E., **Sparkman, N. L.** & Kunz, J., (April, 2017) *Using Color Gradients to Expand Stroop Task*, Southwestern Psychological Association, San Antonio, TX
- Khaleghi, N., Schwarzkopf, A., & **Sparkman, N. L.**, (April, 2017) *Body Satisfaction, Activity and the Use of Online Dating Services*, Southwestern Psychological Association, San Antonio, TX
- Amerson, R., & **Sparkman, N. L.**, (April, 2017) *Tattoo Visibility and Personality*, Southwestern Psychological Association, San Antonio, TX
- Collins, R., Escobar, H. A., & **Sparkman, N. L.**, (April, 2017) *The Elusive Relationships between Loneliness, Internalized Morality and Television Viewership*, Southwestern Psychological Association, San Antonio, TX
- Kunz, J., Rice, M., & **Sparkman, N. L.**, (April, 2017) *The Relationship between Procrastination and Self-control*, Southwestern Psychological Association, San Antonio, TX
- Amerson, R. & **Sparkman, N. L.**, (April, 2017) *The Relationship between the Big Five and App Usage*, Southwestern Psychological Association, San Antonio, TX
- Lovett, J., Garcia, S., & **Sparkman, N. L.**, (April, 2017) *Exploratory Behavior in the Madagascar Hissing Cockroach*, Southwestern Psychological Association, San Antonio, TX

Sanchez, E., Thomas, T. A., **Sparkman, N. L.**, (April, 2017) *The Relationship between Imposterism and Self-Perception*, Southwestern Psychological Association, San Antonio, TX

Sparkman, N.L. (April, 2016) *Bringing Behavioral Pharmacology to Your Classroom*, Southwestern Teaching of Psychology, Dallas, TX

Saunders, L & **Sparkman, N.L.** (April, 2016) *Mindfully experiencing nature: Relation between connectedness to nature, mindfulness and empathy*. Southwestern Psychological Association, Dallas.

Lovett, J.R. & **Sparkman, N.L.** (April, 2016) *A novel model for drug effects: Effects of epinephrine on Daphnia behavior*. Southwestern Comparative Behavioral Neuroscience, Association, Dallas, TX.

Sparkman, N.L. (March, 2014) *Perinatal immune activation alters pup subsonic vocalization patterns and interacts with stressors to modulate adult sensory motor gating*. Southwestern Comparative Psychological Association, San Antonio, TX.

Sparkman, N.L. & Ming, L. (November, 2011) *Classical conditioning in polypharmacy: Drug-drug conditioning of citalopram and haloperidol or olanzapine*. Society for Neuroscience, Washington, D.C.

Burton, M.D., **Sparkman, N.L.**, Johnson, R.W. (June, 2011) *Inhibition of interleukin-6 trans-signaling in the brain inhibits lipopolysaccharide-induced sickness behavior*. Psychoneuroimmunology Research Society, Chicago, IL.

Buchanan, J.B., **Sparkman, N.L.**, Johnson, R.W. (May, 2009) *Methamphetamine sensitization alters central cytokine release associated with peripheral immune activation*. . Psychoneuroimmunology Research Society, Breckenridge, CO.

Rosczyk, H.A., **Sparkman, N.L.** & Johnson, R.W. (May, 2008) *Neuroinflammation and cognitive function in aged mice following minor surgery*. Psychoneuroimmunology Research Society, Madison, WI.

Sparkman, N.L. (October, 2007) *Inflammatory Brain Cytokines and Cognition: Implications for Aging and HIV*, University of Missouri, Interdisciplinary Neuroscience Program, invited speaker.

Sparkman, N.L., Krzyszton, C.P., Woods, J.A., Johnson, R.W. (2007) *Mice deficient in interleukin (IL)-10 display reduced anxiety and decreased locomotor activity without alterations in spatial learning*, Psychoneuroimmunology Research Society, Arcachon, France. [Brain, Behavior and Immunity, vol 21, 4, supplement 1]

Buchanan, J.B., **Sparkman, N.L.**, Johnson, R.W. (2007) *Mild repeated stress exacerbates neuroinflammation and prolongs disruption of spatial working memory in aged vs. adult mice*. Psychoneuroimmunology Research Society, Arcachon, France. [Brain, Behavior and Immunity, vol 21, 4, supplement 1]

Krzyszton, C.P., **Sparkman, N.L.**, Ryan W. Grant, Woods, J.A., Johnson, R.W. (2007) *Interleukin (IL)-10 protects mice from psychomotor deficits following a peripheral challenge with lipopolysaccharide (LPS)*, Psychoneuroimmunology Research Society, Arcachon, France. [Brain, Behavior and Immunity, vol 21, 4, supplement 1]

Richwine, A.F., Parkin. A.O., Chen, J.O., Buchanan, J.B., **Sparkman, N.L.**, Juraska, J.M., Johnson, R.W. (2007) *Lipopolysaccharide (LPS)-induced sickness behavior and neuroinflammation are exacerbated in mice deficient in interleukin (IL)-10*, Psychoneuroimmunology Research Society, Arcachon, France. [Brain, Behavior and Immunity, vol 21, 4, supplement 1]

Sparkman, N.L., Chen, J., Buchanan, J.B., & Johnson, R.W. (2006) *Peripheral immune activation leads to increased cytokine expression in the hippocampus and cognitive deficits in aged mice. Psychoneuroimmunology Research Society, Miami, FL.* [Brain, Behavior and Immunity, vol 20, 3, supplement 1]

Godbout, J.P., Moreau, M., Lestage, J., Chen, J., **Sparkman, N.L.**, Castanon, N., Kelley, K.W., Dantzer, R., and Johnson R. W. (2006) *Aging exacerbates depressive like-behavior in mice in response to activation of the peripheral innate immune system* Psychoneuroimmunology Research Society, Miami, FL. [Brain, Behavior and Immunity, vol 20, 3, supplement 1]

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]

Sparkman, N.L., Kohman, R.A, Boehm, G.W. (2005) *Learning impairments induced by peripheral lipopolysaccharide administration are dependent upon frequency, dose, and timing of administration.* Psychoneuroimmunology Research Society, Denver, CO. [Brain, Behavior and Immunity, vol 19, 4, supplement 1]

Pereira Do Carmo, G., **Sparkman N.L.**, King, G.R., Boehm G.W. (June, 2005) *Short-duration cocaine administration induces time-dependent changes during withdrawal: An investigation of gender differences.* College on Problems of Drug Dependence. Orlando, FL.

Pereira Do Carmo, G., **Sparkman N.L.**, King, G.R., Boehm G.W. (May, 2005) *Gender differences in elevated plus maze behaviour following withdrawal from chronic cocaine administration.* Society of Biological Psychiatry, Atlanta, GA.

Kohman, R.A., **Sparkman, N.L.**, Bogale, T.M., Boehm, G.W. (November, 2004) *Attenuation of endotoxin-induced cognitive deficits by a selective non-peptide antagonist of corticotropin-releasing factor receptors.* Society for Neuroscience, San Diego, CA.

Sparkman, N.L., Kohman, R.A., Byler, S.L., Garcia, A. & Boehm, G.W. (November, 2003) *Peripheral immune activation impairs two-way active avoidance conditioning in male C5BL/6J mice.* Society for Neuroscience, New Orleans, LA.

Boehm, G.W. & **Sparkman, N.L.** (May, 2003) *Peripheral immune activation alters two-way active avoidance conditioning in female C5BL/6J mice.* Psychoneuroimmunology Research Society, Amelia Island, FL. [Brain, Behavior and Immunity, vol 17, 3]

Sparkman, N.L. & Boehm, G.W. (April, 2003) *Peripheral immune activation alters two-way active avoidance conditioning in female C5BL/6J mice*. Southwestern Comparative Psychological Association, New Orleans, LA.

Sparkman, N.L., Calvert, W.S. Martin, L.A. & Boehm, G.W. (November, 2002) *Effects of intraperitoneal lipopolysaccharide on Morris water maze learning in year-old and two month old female C57BL/6J mice*. Society for Neuroscience, Orlando, FL.

Boehm, G.W., **Sparkman, N.L.**, Pinto, G. & Scott, V.J. (2002) *Effects of intraperitoneal lipopolysaccharide on Morris water maze learning in male C57BL/6J mice*. Psychoneuroimmunology Research Society, Madison, WI [Brain, Behavior and Immunity, vol 16, 2]

Sparkman, N.L., Stuntz, P.M., Heinrich, K.R. & Boehm, G.W. (November, 2001) *Cingulate cortex lesions decrease mitogen-induced lymphoproliferation in rats following forced swimming stress*. Society for Neuroscience, San Diego, CA.

K.R. Heinrich, **N.L. Sparkman**, & T.M. Barth. (November, 2000) *Light deprivation differentially affects recovery from behavioral asymmetry in rats with lesions of the anteromedial cortex or medial agranular cortex*. Society for Neuroscience, New Orleans, LA.

RESEARCH INTERESTS

- Neuroinflammation & Cytokines
- Schizotypy & Depression
- Stereotyping
- Health Promotion