

Curriculum vitae

Jennifer Ann Stokes, PhD

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Education

Undergraduate: The University of Texas at Austin; Austin, TX; 2003 – 2006
BS Psychology

Graduate: University of California, San Diego; La Jolla, CA; 2007 – 2013
PhD Biomedical Sciences
Mentor: Tony L. Yaksh, PhD; Department of Anesthesiology

Postdoctoral Fellowship: University of California, San Diego; La Jolla, CA; 2014 – 2016
School of Medicine; Division of Physiology
Mentor: Frank L. Powell; Division of Physiology

Professional Experience

Assistant Professor. Department of Biology, Centenary College of Louisiana; Shreveport, LA; 2017 – Present

Visiting Assistant Professor. Department of Biology, Beloit College; Beloit, WI; 2016 – 2017

Postdoctoral Fellow. School of Medicine, Division of Physiology; University of California San Diego; La Jolla, CA; 2014 – 2016

Instructor. Inclusive Teaching and Diversity Training Workshops. University of California San Diego; La Jolla, CA; 2015 – 2016

Scientist I – Study Director. Biotox Sciences; San Diego CA; 2013 – 2014

Graduate Research Assistant. Department of Anesthesiology, University of California, San Diego; La Jolla, CA; 2007 – 2013

Graduate Advocate: Summer Training Academy Research Sciences (STARS). University of California, San Diego; La Jolla, CA; 2009

Research Assistant. Waggoner Center for Alcohol and Addiction Research, The University of Texas at Austin; Austin, TX; 2007

Undergraduate Research Assistant. Waggoner Center for Alcohol and Addiction Research, The University of Texas at Austin; Austin, TX; 2004 – 2006

Professional Development Activities

Associated Colleges of the South (ACS) Summer Teaching and Learning Workshop. The University of the South; Sewanee, TN; 2019

Institute on Teaching and Learning. The American Physiological Society; Madison, WI; 2018

Faculty Workshop: Diversity in Hiring and Implicit Bias. Dr. Anita Davis, Director for Diversity and Inclusion, Associated Colleges of the South. Sponsored by Centenary College of Louisiana; Shreveport, LA; 2018

Faculty Institute: Inclusive Classroom Environments and Student Success. Centenary College of Louisiana; Shreveport, LA; 2017

California Summer Institute on Scientific Teaching. Sponsored by the Howard Hughes Medical Institute. University of California, San Diego; La Jolla, CA; 2017

Institute on Teaching and Learning. The American Physiological Society; Madison, WI; 2016

Factors that Increase the Efficiency of Learning and the Myth of Learning Styles. Center for Advancing Mathematics, Science and Engineering Education (CAMSEE). University of California, San Diego; La Jolla, CA; 2016

Chalk-talk Forum Discussion Workshop. University of California, San Diego; La Jolla, CA; 2016

Putting your best foot forward: perfecting your presentation. UCSD Women in Health Sciences. University of California, San Diego; La Jolla, CA; 2016

The College Classroom. Center for Engaged Teaching, University of California, San Diego; La Jolla, CA; 2015

Laboratory Management and Leadership Symposium. University of California, San Diego; La Jolla, CA; 2015

Ethical Challenges of Research: Special Topics. UC San Diego Office of Postdoctoral and Visiting Scholar Affairs, University of California, San Diego; La Jolla, CA; 2015

Science Communication: Distilling Your Message – Structure Matters. UC San Diego Postdoctoral Association, University of California, San Diego; La Jolla, CA; 2015

Courses Taught

Centenary College

Courses at Centenary College were either completely redesigned or are new course additions developed to enhance the physiology curriculum. These courses include both lecture and laboratory components, and are designed as active learning environments. Courses are capped at 25 students per semester, with a usual 18-24 student enrollment per semester.

- BIOL 301/302 Human Anatomy and Physiology I/II (Redesign; Offered every year)
- BIOL 251 Medical Terminology (Redesign – online course; now offered every fall)
- BIOL 306 Nutritional Physiology (New course; Offered every-other spring)
- BIOL 319 Psychopharmacology (New course; Offered every-other fall)
- BIOL 395 Exercise Physiology (New course; Offered every-other fall)
- BIOL 202 Structure-Function (Biology CORE Curriculum; I teach as needed to serve the department)

Beloit College

As a visiting professor I instructed the following courses, with some modifications to the curriculum adding new laboratory activities.

- BIOL 101 Human Biology
- BIOL 256 Anatomy
- BIOL 357 Human Physiology

Pedagogical Research and Scholarly Activities

Pedagogical research project material available here: www.jenniferannstokes.com/teaching

Manuscripts in Preparation

1. **Stokes JA.** *Collaborative Exams in an Undergraduate Anatomy and Physiology Classroom Enhance Students' Perceived Learning and Knowledge Retention.*

Conference Abstracts and Poster Presentations

1. **Stokes JA** (2019). *Collaborative Exams in an Undergraduate Anatomy and Physiology Classroom Enhance Students' Perceived Learning and Knowledge Retention*. [poster abstract]. Experimental Biology; Orlando, FL. Abstract nr 598.1/E707
2. **Stokes JA** and Groszofsky A (2017). *A case study for teaching neuroanatomy structure and function: Doctor, why am I so tired and dizzy?* [poster abstract]. Experimental Biology; Chicago, IL. Abstract nr 576.4/T10

Oral Presentations

1. **Stokes JA** (2019). *Collaborative Exams in an Undergraduate Anatomy and Physiology Classroom Enhance Students' Perceived Learning and Knowledge Retention*. [Symposium Oral Presentation – Featured Topic]. Experimental Biology; Orlando, FL. Abstract nr 598.1
2. Groszofsky A, **Stokes JA** (2017). *Case Study for Teaching Neuroanatomy Structure and Function* [symposium presentation]. 89th Annual Meeting of the Midwestern Psychological Association; Chicago IL. April 2017.

Other Publications

1. **Stokes JA** (2019). *My first run at teaching an integrated physiology course: Lessons learned*. Physiology Education Community of Practice (PECOP) Blog. Life Science Teaching Resource Community. <https://blog.lifescitrc.org/pecop/2019/01/14/my-first-run-at-teaching-an-integrated-physiology-course-lessons-learned/>
2. **Stokes JA** and Groszofsky A (2018). Case study activity for learning neuroanatomy and physiology: “Doctor, why am I so tired and dizzy?” The FASEB Journal 31, no. 1 Supplement; 576-4. Retrieved from: <http://www.lifescitrc.org/resource.cfm?submissionID=11510>

Basic Science Research

Current research activities and projects are outlined here: www.stokeslab.com/research

*Denotes mentored student contribution

Publications

1. De La Zerda DJ, **Stokes JA**, Do J, Go A, Fu Z, Powell FL (2018). *Ibuprofen does not Reverse Ventilatory Acclimatization to Chronic Hypoxia in Rats*. Respir Physiol Neurobiol. 256:29-35
2. **Stokes JA**, Arbogast TE*, Moya, E, Fu Z, Powell FL (2017). *Minocycline blocks glial cell activation and ventilatory acclimatization to hypoxia*. J Neurophysiol. 117(4):1625-1635.
3. Hocker A, **Stokes JA**, Powell FL, Huxtable AG (2017). *The impact of inflammation on respiratory plasticity*. Experimental Neurology. 287(Pt 2):243-253

4. Park HJ, **Stokes JA**, Corr M, Yaksh TL (2014). *Toll-like receptor signaling regulates cisplatin-induced mechanical allodynia in mice*. *Cancer Chemother Pharmacol*. 73 (1), 25-34.
5. **Stokes JA**, Cheung J*, Eddinger KA, Corr M, Yaksh TL (2013). *Toll-like receptor signaling adapter proteins govern spread of neuropathic pain and recovery following nerve injury in male mice*. *J Neuroinflammation*. 10(1):148.
6. **Stokes JA**, Corr M, Yaksh TL (2013). *Spinal Toll-like receptor signaling and nociceptive processing: Regulatory balance between TIRAP and TRIF cascades mediated by TNF and IFN β* . *Pain*. 154(5):733-42.
7. Park HJ, **Stokes JA**, Pirie E*, Skahen J, Shtaerman Y, Yaksh TL (2013). *Persistent hyperalgesia in the Cisplatin treated mouse as defined by threshold measures and the conditioned place preference paradigm and changes in DRG ATF3: Effects of gabapentin, ketorolac, and etanercept*. *Anesth Analg*. 116(1):224-31.
8. Christianson CA, Dumlao D, **Stokes JA**, Dennis EA, Svensson CI, Corr M, Yaksh TL (2011). *Spinal TLR4 mediates the transition to a persistent mechanical hypersensitivity after the resolution of inflammation in serum-transferred arthritis*. *Pain*. 152(12):2881-91.
9. **Stokes JA**, Corr M, Yaksh TL (2011). *Transient tactile allodynia following intrathecal puncture in mouse: contributions of toll-like receptor signaling*. *Neurosci Lett*. 504(3):215-8.

Conference Abstracts and Poster Presentations

1. Faul JR*, Barron KT*, Morgan WA*, Powell FL, **Stokes JA** (2019). *Microglia and Astrocyte Activation in Select Ventilatory Control Regions Following Exposure to Chronic Sustained Hypoxia*. [poster abstract]. Centenary College Research Forum; Shreveport, LA
2. Morgan WA*, Faul JR*, Barron KT*, Powell FL, **Stokes JA** (2019). *Glial Cell Activation in the Retrotrapezoid Nucleus following Chronic Sustained Hypoxia*. [poster abstract]. Centenary College Research Forum; Shreveport, LA
3. Faul JR*, Barron KT*, Morgan WA*, Powell FL, **Stokes JA** (2019). *Microglia and Astrocyte Activation in Select Ventilatory Control Regions Following Exposure to Chronic Sustained Hypoxia*. [poster abstract]. Louisiana State University – Shreveport Scholars Forum; Shreveport, LA
4. **Stokes JA**, Arbogast TE*, Powell FL (2016). *Microglia activation occurs early in sustained hypoxia and is necessary for ventilatory acclimatization to hypoxia* [poster abstract]. Society for Neuroscience Annual Meeting; San Diego, CA. Abstract nr. 7659.
5. **Stokes JA**, Arbogast TE*, Powell FL (2016). *Ventilatory acclimatization to hypoxia requires early microglia activation* [poster abstract]. Experimental Biology; San Diego, CA. Abstract nr 1262.2

6. Arbogast TE*, **Stokes JA**, Powell FL (2016). *Time course of brainstem glial activation following exposure to chronic sustained hypoxia* [poster abstract]. Experimental Biology; San Diego, CA. Abstract nr 1262.1
7. **Stokes JA**, Arbogast TE*, Powell FL (2016). *Ventilatory acclimatization to hypoxia requires early microglia activation* [poster abstract]. 9th Annual SoCal Symposium on Glial-Neuronal Interactions in Health and Disease; Riverside, CA. Abstract nr 49.
8. **Stokes JA**, Fu Z, Powell FL (2015). *Glia inhibitor blocks ventilatory acclimatization to chronic sustained hypoxia* [poster abstract]. Experimental Biology; 2015 Mar 28-Apr 1; Boston, MA. Abstract nr 659.1.
9. **Stokes JA**, Cheung J*, Corr MP, Yaksh TL (2011). *Spinal Toll-like receptor adaptor proteins modulate central pain processing*. Society for Neuroscience, Symposium Abstracts.
10. **Stokes JA**, Corr MP, Yaksh TL (2010). *Spinal toll-like receptors: initiation of tactile allodynia*. Frontiers of Clinical Investigation Symposium: Pain, Symposium Abstracts.
11. **Stokes JA**, Christianson C, Corr MP, Yaksh TL (2010). *Spinal toll-like receptors; initiation of tactile allodynia and glial activation*. International Association for the Study of Pain, Symposium Abstracts.
12. Christianson C, **Stokes JA**, Corr MP, Yaksh TL (2010). *Toll-like receptor 4 is required for continual mechanical hypersensitivity during K/BxN serum transfer arthritis*. International Association for the Study of Pain, Symposium Abstracts.
13. **Stokes JA**, Yaksh TL (2009). *Phospho-NR1 and its role in spinal pain processing*. Society for Neuroscience, Symposium Abstracts.
14. **Stokes JA**, Ozburn AR, Seymour J, Blednov Y, and Harris RA (2006). *The effect of alcohol experience on subsequent alcohol intake in two F1 hybrid mouse strains: C57Bl/6J x FVB/NJ and C57Bl/6J x NZB/B1NJ*. Society for Neuroscience, Symposium Abstracts.

Oral Presentations

1. **Stokes JA**, Arbogast TE*, Powell FL (2016). *Ventilatory acclimatization to hypoxia requires early microglia activation* [Symposium Oral Presentation – Featured Topic]. Experimental Biology; San Diego, CA. Abstract nr 1262.2
2. **Stokes JA** (2012). *Spinal Toll-like receptors and nociceptive processing*. Ph.D. thesis defense presentation; University of California, San Diego; La Jolla, CA
3. **Stokes JA**, Yaksh TL (2010). *Spinal toll-like receptors; glial activation and neuropathic pain*. Pharmacology Research Discussions, Presentation; University of California, San Diego; La Jolla, CA
4. **Stokes JA**, Cui J, Lipton SA (2006). *Mouse embryonic stem cells injected into the ischemic mouse brain*. University of California, San Diego Summer Research Symposium, Presentation.

Mentored Students

Jada Faul. Undergraduate Student; [Stokes Lab](#), Centenary College of Louisiana, Shreveport, LA; 2018 – Present

Kyle Barron. Undergraduate Student; [Stokes Lab](#), Centenary College of Louisiana, Shreveport, LA; 2018, Summer

William Alex Morgan. Undergraduate Student; [Stokes Lab](#), Centenary College of Louisiana, Shreveport, LA; 2018, Summer

Tara Arbogast. Master's Student; Mentor: Frank L. Powell, School of Medicine; Division of Physiology; University of California, San Diego; La Jolla, CA; 2014 – 2016

Jonathan Cheung. Undergraduate Student; Mentor: Tony L. Yaksh, Department of Anesthesiology; University of California, San Diego; La Jolla, CA; 2010 - 2012

Elaine Pirie. Undergraduate Student; Mentor: Tony L. Yaksh, Department of Anesthesiology; University of California, San Diego; La Jolla, CA; 2011

Funding

- *Teaching Career Enhancement Award.* American Physiological Society; 2019-2020
 - Project title: Using interactive technology in an integrated human physiology and anatomy course to enhance student engagement, knowledge, and retention.
 - Amount: \$10,000

Honors and Awards

- *Teaching Section Research Recognition Award.* American Physiological Society; 2019
- *Faculty-Student Summer Research Award.* Centenary College of Louisiana; 2019
- *Physiology Education Community of Practice (PECOP) Fellow.* American Physiological Society; 2018 – 2019
- *Teaching Section Research Recognition Award.* American Physiological Society; 2018
- *Faculty-Student Summer Research Award.* Centenary College of Louisiana; 2018
- *Respiration Section Research Recognition Award.* American Physiological Society; 2015
- *Summer Training Academy Research Sciences (STARS) Research Scholar.* University of California, San Diego; 2006
- *Outstanding Student Volunteer Award.* The University of Texas at Austin; 2006
- *Liberal Arts Undergraduate Research Award.* The University of Texas at Austin; 2005

Service

University Service

- *Institutional Athletics Committee*. Centenary College of Louisiana; 2018 – Present
- *Enrollment Policy Committee*. Centenary College of Louisiana; 2018 – Present
- *Department of Biology Faculty Search Committee*. Centenary College of Louisiana; 2018 – 2019
- *Faculty Club President*. Centenary College of Louisiana; 2017 – 2018
- *Department of Biology Faculty Search Committee*. Centenary College of Louisiana; 2017 – 2018
- *Co-Director*. Department of Physiology Journal Club; University of California, San Diego 2015 – 2016

Professional Service

- American Physiological Society
 - Teaching Section Steering Committee Member; 2018 – Present
 - Guyton Awards Committee Chair; 2019 – Present
 - Guyton Awards Committee Chair-Elect; 2018 – 2019
 - APS Institute for Teaching and Learning
 - Planning Committee Member; 2018 – Present
 - Life Science Teaching and Resource Community
 - Community Member; 2016 – Present
 - Resource Review Board; 2017 – Present
- Reviewing Activities
 - *Advances in Physiology Education*; 2019 – Present

Community Service

- *Science Fair Judge*. Southfield School. Shreveport, LA; 2019
- *Resource Contributor*. Martin Luther King Health Center. Shreveport, LA; 2018
- *Coach and Mentor*. San Diego VeloYouth. San Diego, CA; 2014 – 2016
- *Board of Directors*. SkyFlash Racing. San Diego, CA; 2014 – 2016
- *Webmaster*. SkyFlash Racing. San Diego, CA; 2014 – 2016
- *IMPACT Tutor*. Reality Changers; San Diego CA; 2012 – 2013
- *Co-Captain*. UC San Diego Triathlon Team. San Diego, CA; 2009 – 2011
- *Logistics Chair, Executive Committee*. The Project – Volunteer and Service Learning Center. The University of Texas at Austin, Austin, TX; 2006 – 2007
- *Project Leader*. The Project – Volunteer and Service Learning Center. The University of Texas at Austin, Austin, TX; 2004 – 2006

Professional Society Membership

American Physiological Society; 2014 – Present

Society for Neuroscience; 2006 – 2015

International Association for the Study of Pain; 2010 – 2011