

## CURRICULUM VITAE

Melvin Lee Shawn Bates  
Email: [melvin.bates@gmail.com](mailto:melvin.bates@gmail.com)

---

---

### EDUCATION

- May 2017     **Ph.D.** Neuroscience, Texas A&M University, College Station, TX  
Dissertation Committee: Shoshana Eitan, Ph.D., Paul Wellman, Ph.D., Stephen Maren, Ph.D., & Michael Smotherman, Ph.D.
- 2012           **M. A.** Psychology, CSU San Marcos, San Marcos, CA  
Thesis: “Effects of Dissociative Exposure in Adolescence on Cognitive Function in Adulthood”  
Thesis Committee: Keith A. Trujillo, Ph.D., Dustin Calvillo, Ph.D., & Arturo Zavala, Ph.D.
- 2007           **B.A.** Psychology, CSU Long Beach, Long Beach, CA  
Research Emphasis: User Testing for Accessibility
- 
- 

### AWARDS AND HONORS

- 2016           IIDEA Grant Award: “Maximizing Aggie Diversity: The M.A.D. Chat Podcast”
- 2015           SfN-TAMU Poster Competition 3<sup>rd</sup> place in Senior Graduate Student Category
- 2015           TAMIN Travel Award
- 2015           Summer Program in Neuroscience Ethics & Survival (SPINES) Fellow
- 2014           TAMIN Travel Award
- 2014           SfN-TAMU Poster Competition 1<sup>st</sup> place in Senior Graduate Student Category
- 2013           TAMIN Travel Award
- 2011           Heep Fellowship for Graduate Students
- 2009           Research Initiative for Scientific Enhancement (RISE) Graduate Scholar
- 2006           President’s List, CSU Long Beach
- 2005           Dean’s List, CSU Long Beach
- 2004           W. Gregory Barrett Memorial Scholarship

---

---

## PUBLICATIONS

### *Published:*

- Bates, M.L.S.,** Emery, M.A., Wellman, P.J., and Eitan S. (2016). Social housing conditions influence the perception of pain in adolescent mice, *European Journal of Pain*, 20.
- Bates, M.L.S.,** Emery, M.A., Wellman, P.J., and Eitan S. (2014). Social housing conditions influence morphine dependence and the extinction of morphine place preference in adolescent mice, *Drug & Alcohol Dependence*, 142.
- Emery, M.A., **Bates, M.L.S.,** Wellman, P.J., and Eitan S (2016). Differential effects of oxycodone, hydrocodone, and morphine on activation levels of signaling molecules, *Pain Medicine*, 17.
- Emery, M.A., **Bates, M.L.S.,** Wellman, P.J., and Eitan S. (2015). Differential Effects of oxycodone, hydrocodone, and morphine on the responses of D2/D3 dopamine receptors, *Behavioral Brain Research*.
- Barwatt J.W., Hofford R.S., Emery M.A., **Bates M.L.S.,** Wellman P.J., and Eitan S. (2013): Differential effects of methadone and buprenorphine on the response of D2/D3 dopamine receptors in adolescent mice, *Drug & Alcohol Dependence*, 132.
- Trujillo, K. A., Sullivan, B., Heller, C. Y., Smith, M. L., Garcia, C., & **Bates, M.** (2011). The behavioral pharmacology of ketamine: Implications for drug abuse, addiction and psychiatric disorders, *ILAR Journal*, 3.

### *Submitted & In preparation:*

- Eitan, S., Emery, M.A., **Bates, M.L.S.,** & Horrax, C. (*In revision*). Opioid addiction: Who are your real friends? *Neuroscience & Biobehavioral Reviews*.
- Emery M.A., **Bates, M.L.S.,** Wellman P.J., & Eitan S. (*Submitted*). Hydrocodone, but neither morphine nor oxycodone, is effective in suppressing the development of burn-induced hyperalgesia, *European Journal of Pain*.
- Bates, M.L.S.** and Trujillo, K. (*In preparation*). Repeated Ketamine Treatment in Adolescence Produces Sensitization, but not Memory Deficits, in Adulthood.
- Emery M.A., **Bates, M.L.S.,** Wellman P.J., & Eitan S. (*In preparation*). Burn-injury decreases the analgesic effects of opioids.
- Emery M.A., **Bates, M.L.S.,** Wellman P.J., & Eitan S. (*In preparation*). Hydrocodone, but neither morphine nor oxycodone, is effective in suppressing the development of burn-induced allodynia in the uninjured foot contralateral to the burn.

---

---

## POSTERS AND PRESENTATIONS

\* = *Presenting Author*

- Bates, M.L.S.\*,** Emery, M.A., Wellman, P.J., and Eitan S. (2015, October). Contribution of MRGPRB4-expressing sensory neurons to the socio-environmental effect on opioid dependence and reward in adolescent mice. Presented at the **Annual Meeting of the Society for Neuroscience (SfN)**, Chicago, IL. Abstract #: 783.12/K13

- Emery M.A. \*, **Bates M.L.S.**, Wellman P.J., and Eitan S. (2015, October). Differential locomotor responses to quinpirole following various opioids is driven by the mu receptor. Presented at the **Annual Meeting of the Society for Neuroscience (SfN)**, Chicago, IL. Abstract #: 783.12/K13
- Bates, M.L.S.\***, Emery, M.A., Wellman, P.J., and Eitan S. (2015, March). Social housing conditions influence the analgesic properties of opioids in adolescent mice. Presented at the **TAMIN Annual Symposium**, College Station, TX.
- Emery M.A. \*, **Bates M.L.S.**, Wellman P.J., and Eitan S. (2015, March). Differential effects of various opioids on the development of allodynia and abuse in the context of pain. Presented at the **TAMIN Annual Symposium**, College Station, TX.
- Bates, M.L.S.\***, Emery, M.A., Wellman, P.J., and Eitan S. (2014, November). Social housing conditions influence the analgesic properties of opioids in adolescent mice. Presented at the **Annual Meeting of the Society for Neuroscience (SfN)**, Washington, D.C. Abstract #: 372.22/BB32
- Emery M.A. \*, **Bates M.L.S.**, Wellman P.J., and Eitan S. (2014, November). Differential effects of various opioids on the development of allodynia and abuse in the context of pain. Presented at the **Annual Meeting of the Society for Neuroscience (SfN)**, Washington, D.C. Abstract #: 244.14/FF18
- Bates, M.L.S.\***, Cole, S., Hofford, R.S., Emery, M.A., Wellman, P.J., and Eitan S. (2013, November). Social housing conditions influence extinction of morphine place preference in adolescent mice. Presented at the **Annual Meeting of the Society for Neuroscience (SfN)**, San Diego, CA. Abstract #: 818.07/T9
- Calderwood, M. \*, **Bates, M.L.S.**, Trujillo, K.A. (2013, November). Locomotor sensitization to a low dose of ketamine that causes locomotor depression. Presented at the **Annual Meeting of the Society for Neuroscience (SfN)**, San Diego, CA. Abstract #: 156.13/BB\*
- Emery M.A. \*, **Bates M.L.S.**, Wellman P.J., and Eitan S. (2013, November). Differential effects of oxycodone, hydrocodone, and morphine on the response of D2/D3 dopamine receptors in adolescent mice. Presented at the **Annual Meeting of the Society for Neuroscience (SfN) Conference**, San Diego, CA. Abstract #: 257.12/LL3
- Barwatt J.W. \*, Hofford R.S., Emery M.A., **Bates M.L.S.**, Wellman P.J., and Eitan S. (2013, April). Differential effects of methadone and buprenorphine on the response of D2/D3 dopamine receptors in adolescent mice. Presented at the **TAMIN Annual Symposium**, College Station, TX.
- Hofford R. S., Cole S. L., **Bates M. L. S.\***, Emery M. A., Wellman P. J., & Eitan S. (2013, April). The oxytocin and arginine vasopressin systems mediate the social effect on morphine conditioned place preference. Presented at the **TAMIN Annual Symposium**, College Station, TX.
- Seloff, K. E. \*, Emery, M. A., **Bates, M. L. S.**, & Eitan, S. (2013). Repeated morphine exposure decreases mGluR1 activity in the dorsal striatum of adolescent mice at 2, but not 4 or 24, hours following final administration of morphine. Presented at the **TAMIN Annual Symposium**, College Station, TX.
- Barwatt, J. W. \*, Hofford, R. S., Emery, M. A., **Bates, M. L. S.**, Wellman, P. J., & Eitan, S. (2012) Differential effects of methadone and buprenorphine on the response of D2/D3 dopamine receptors in adolescent mice. Presented at the **Annual Meeting of the Society for Neuroscience**, New Orleans, LA. Abstract #: 171.08/X15

- Hofford, R. S., Cole, S. L., **Bates, M. L. S.\***, Emery, M. A., Wellman, P. J., Eitan, S. (2012) The oxytocin and arginine vasopressin systems mediate the social effect on morphine conditioned place preference. Presented at the **Annual Meeting of the Society for Neuroscience**, New Orleans, LA. Abstract #: 257.14/S20
- Klumph, M.,\* Heller, C. Y., & **Bates, M.** (2010). Adolescents show an enhanced behavioral response to the dissociative drug dextrorphan when compared to adults. Presented at the **Annual Meeting of the Society for Neuroscience**, San Diego, CA. Abstract #: 67.16/GG3
- Trujillo, K.A.\*, Klumph, M. and **Bates, S.** (2010). Behavioral effects of dissociatives are increased in adolescence. Presented at the **Basic Science Datablitz, National Hispanic Science Network on Drug Abuse Annual Conference**.

---

---

## TALKS

- Bates, M. L. S.** (2016, October). The role of social environment on morphine response in adolescent mice. **Neuroscience Seminar**, El Paso, TX.
- Bates, M. L. S.** (2016, October). The role of social environment on morphine reward. Keynote address at **Substance Use Symposium**, College Station, TX.
- Bates, M. L. S.** (2016, April). Role of social grooming in the socio-environmental effect on morphine response in adolescent mice. **8<sup>th</sup> Annual TAMIN Symposium**, College Station, TX.
- Bates, M. L. S.** (2015, July). Social environment influences morphine sensitivity in adolescent mice. **SPINES Symposium**, Woods Hole, MA.
- Bates, M. L. S.** (2015, March). Social environment influences morphine-induced pain in adolescent mice. **TAMIN Grad Duo Seminar**, College Station, TX.
- Bates, M. L. S.** (2014, October). Social housing influences morphine responses in adolescent mice. **Behavioral & Cellular Neuroscience Seminar**, College Station, TX.
- Bates, M. L. S.** (2012, December). Effects of dissociative exposure in adolescence on behavior in adulthood. **Master's Thesis Defense**, CSU San Marcos, San Marcos, CA.
- Bates, M. L. S.** (2012, February). Social housing influences morphine responses in adolescent mice. **Behavioral & Cellular Neuroscience Seminar**, College Station, TX.
- Bates, M.** (2009, April). Low dose depressant effects of ketamine. **CSU San Marcos Annual Student Research Competition**, San Marcos, CA.

---

---

## RESEARCH EXPERIENCE

2011-Present Graduate Research Assistant, Texas A&M University  
PI: Shoshana Eitan, Ph.D.

- Research in neuroscience with a focus on the role of the social environment on an animal model of adolescent drug use
- Utilized behavioral and molecular techniques
- Supervise undergraduate researchers

2009-2012 Graduate Research Associate, California State University, San Marcos

PI: Keith A Trujillo, Ph.D.

- Research in psychopharmacology with a focus on behavioral changes induced by drugs of abuse in animal models
- Supervise undergraduate researchers in psychopharmacology research
- Assist in Vivarium upkeep and maintenance

2007-2009 Research Assistant, California State University, Long Beach  
Center for Usability in Design and Accessibility

PIs: Kim Vu, Ph.D. & Thomas Strybel, Ph.D.

- Research using the “user-centered” approach to interface and instructional design, usability and accessibility testing methods, and human factors project management
- Develop empirically based standards and procedures for evaluating usability and accessibility in both software product development and use

---

---

## TEACHING EXPERIENCE

Experimental Psychology Laboratory, Texas A&M University (Spring, 2016)

Instructor (Avg. Course Eval. = 4.8)

- Laboratory course in which students completed pre-designed experimental modules, and wrote APA-style papers
- Instructed lab sections of approximately 20 students
- Assigned and graded paper sections
- Maintained online-learning site for the students
- 

Experimental Psychology Laboratory, Texas A&M University (Fall, 2015)

Instructor (Avg. Course Eval. = 4.5)

- Laboratory course in which students completed pre-designed experimental modules, and wrote APA-style papers
- Instructed lab sections of approximately 20 students
- Assigned and graded paper sections
- Maintained online-learning site for the students

Introduction to Psychology, Texas A&M University (Summer, 2016)

Instructor: Adrienne Carter-Sowell, Ph.D.

Guest Lecturer

- Created and presented a lecture on biology and behavior

Physiological Psychology, Texas A&M University (Fall 2013 & Spring, 2015)

Instructor: Shoshana Eitan, Ph.D.

Guest Lecturer

- Created and presented a lecture on the structure of the nervous system
- Wrote test questions for midterm exam

Psychology of Women, Texas A&M University (Fall, 2016)  
Instructor: Pamela Edens, Ph.D.  
Teaching Assistant

Introduction to Psychology, Texas A&M University (Spring, 2015)  
Instructor: Rachel Hull, Ph.D.  
Teaching Assistant

- Provided assistance to students in two hybrid sections of this course
- Maintained the online-learning (Blackboard) site
- Graded and troubleshooted calibrated peer review

Introduction to Psychology, Texas A&M (Fall, 2014)  
Instructor: Shane Clifford, Ph.D.  
Teaching Assistant

Introduction to Psychology, California State University, San Marcos (Fall, 2010)  
Teaching Assistant

- Lead weekly discussion section for a class of undergraduates
- Created lesson plan that included hands-on activities
- Disseminated weekly quizzes
- Graded written assignments

Freshman Seminar, California State University, Long Beach (Fall, 2005/2006)  
Peer Mentor

- Co-facilitated freshman seminar course that assisted students with transition to college
- Created lesson plans
- Oversaw icebreaker activities

---

---

## PEDAGOGICAL TRAINING

Received Academy for Future Faculty certificate, Texas A&M University (April, 2016)

- Had the opportunity to learn from a diverse pool of professors known for excellence in teaching.
- Received mentorship in the area of teaching in higher education environments and exploration of career paths.
- Developed teaching portfolio materials for use in academic job searches.

Attended Departmental Teaching Assistant Training, Texas A&M University (September, 2014)

Attended “Teaching Assistant Institute” by Texas A&M University Center for Teaching Excellence (August, 2014)

Attended graduate student workshop “Mentoring Undergraduates in Research.” (September, 2013)

Attended 4-day teaching workshop presented by Dr. Ludy Benjamin (May 14-17, 2012)

---

---

## RELATED WORK/VOLUNTEER EXPERIENCE

- 2005-2007     Support Technician, California State University, Long Beach
- Assembled and maintained computers and peripheral equipment for University faculty and staff
  - Provided training for incoming technicians
- 2004-2005     Guest Services Host, Disneyland Resort, Anaheim, CA

---

---

## SERVICE

- 2013-2016     Brain Day Planning Committee & Participant
- Brain Day is a program where graduate students in TAMIN go to a local elementary school, populated by underrepresented minorities, and teach basic neuroscience concepts
- 2013-2016     Student Research Week Judge
- 2014-2016     TAMIN Webmaster
- Update and edit the TAMIN website as necessary
  - Work closely with TAMIN faculty and staff to determine website content
- 2013           Graduate & Professional Student Council Delegate for Neuroscience Department
- Attend weekly GPSC meetings
  - Provide representation for the department in the GPSC
- 2013           Psychology Graduate Student Council Member
- 2011-2013     TAMIN Symposium Planning Committee
- 2012-2013     Society for Neuroscience Local Chapter Graduate Student Representative
- 2012           TAMIN Brain Bowl Coach
- Ran practices for Texas A&M team in the undergraduate brain bowl that was held at UT Health Science Center, San Antonio, TX

---

---

## MEMBERSHIPS

Psi Chi: National Honors Society in Psychology  
Society for Neuroscience Student Member

---

---

## SKILLS

### Software

- GraphPad Prism
- Microsoft Office
  - Access
  - Excel
  - Powerpoint
  - Word
- SPSS
- Versamax & Versamap
- San Diego Instruments Point Activity System
- HTML

### Laboratory

- Training and experience in hazardous materials handling
- Polymerase Chain Reaction (PCR), qRT-PCR
- SDS-PAGE and Western blot
- Laboratory fluids and chemical solutions preparation
- Histology: immunohistochemistry
- Care and handling of both rats and mice
- Small animal surgery, including:
  - Stereotaxic surgery in mice, including cannulation and AAV injection
  - Injections (i.p. and s.c.) in both rats and mice, p.o. (gavage) in mice
  - Use of gas anesthesia in mice
  - Perfusion of mice, including tissue harvesting
- Behavioral testing, including:
  - Morris water maze
  - Locomotor activity testing
  - Novel object/place recognition
  - Conditioned Place Preference
  - Tail Withdrawal Assay
  - Mechanical Allodynia (von Frey) and acetone test
  - Hot plate test
  - Assessment of stereotypy and ataxia
  - Conditioned Taste Aversion

---

---

## REFERENCES

Shoshana Eitan, PhD

Phone: 979-845-2508

Email: seitan@tamu.edu

Title: Associate Professor, Psychology

Relationship: Doctoral Dissertation Chair & Principal Investigator



Keith Trujillo, PhD

Phone: 760-750-4084

Email: keith@csusm.edu

Title: Professor, Psychology & Biology

Relationship: Master's Thesis Chair & Principal Investigator

Paul Wellman, PhD

Phone: 979-777-3163

Email: paul-wellman@tamu.edu

Title: Professor, Psychology

Relationship: Dissertation Committee Member