

**SCOTT E. BOWEN, Ph.D.****Curriculum Vitae**

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**Education:**

<b>Dates</b>	<b>Institution and Location</b>	<b>Degree</b>
1988	University of Mississippi University, MS 38677	Bachelor of Arts in Psychology
1991	University of Mississippi University, MS 38677	Master of Arts in Psychology
1993	University of Mississippi University, MS 38677	Ph.D. in Psychology (Psychopharmacology)

**Post Graduate Training:**

<b>Dates</b>	<b>Institution and Location</b>	<b>Degree</b>
1993-1995	Virginia Commonwealth University Pharmacology and Toxicology Richmond, VA	NIDA Postdoctoral Fellow (T32ES07087-14&15);
1995-1997	Virginia Commonwealth University Pharmacology and Toxicology Richmond, VA	NIDA Postdoctoral Fellow NRSA DA05670
1997-2001	Wayne State University Department of Psychology Detroit, MI 48202	Postdoctoral Fellow in Psychopharmacology

**Faculty Appointments:**

<b>Dates</b>	<b>Institution and Location</b>	<b>Degree</b>
2001 - 2003	Wayne State University Department of Psychology	Assistant Professor-Research

Detroit, MI 48202

2003 - 2007	Wayne State University Department of Psychology and Obstetrics and Gynecology Detroit, MI 48202	Assistant Professor
2007 - 2012	Wayne State University Department of Psychology and Obstetrics and Gynecology Detroit, MI 48202	Associate Professor (Tenured August 2007)
2012 - 2018	Wayne State University Department of Psychology Detroit, MI 48202	Associate Professor
2018 - <i>Present</i>	Wayne State University Department of Psychology Detroit, MI 48202	Professor (Promoted August 2018)
2018 - 2019	Wayne State University Department of Psychology Detroit, MI 48202	Interim Chair (September 2018)
2019 - <i>Present</i>	Wayne State University Department of Psychology Detroit, MI 48202	Department Chair (August 2019)

**Positions Held Concurrently:**

<b>Dates</b>	<b>Institution and Location</b>	<b>Appointment Title</b>
2002 - <i>Present</i>	Wayne State University Detroit, MI 48202	Graduate Faculty
2007 - <i>Present</i>	Translational Neuroscience Program Department of Psychiatry & Behavioral Neurosciences Wayne State University School of Medicine Detroit, MI 48202	Graduate Faculty member
2008 - 2018	Department of Psychology Behavioral and Cognitive Neuroscience Wayne State University Detroit, MI 48202	Area Chair

**Professional Development Workshops:**

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- 2019 Leading and Influencing as a Department Chair, Academic Impressions, Denver, CO (Feb 18-20)
- 2019 Chairs Summer Leadership Institute, Wayne State University, Detroit, MI (July 18-20)
- 2020 Council of Graduate Departments of Psychology, American Psychology Association, St. Petersburg, FL (Feb 20-23)
- 2020 Chairs Summer Leadership Institute, Wayne State University, Detroit, MI
- 2020 Panelist on the Provost's Professional Development Seminar, "Writing Persuasive Promotion and Tenure Letters", Wayne State University, Detroit, MI (Oct 23)
- 2021 Summer 2021 Chair Workshop in collaboration with NSF WSU-GEARS "A DEI Lens on Faculty Evaluations", Wayne State University, Detroit, MI (June 9 & 24)
- 2021 Fall 2021 Chair Workshop in collaboration with NSF WSU-GEARS "Work, Family, Life", Wayne State University, Detroit, MI (Oct 15)
- 2021 Fall 2021 Chair Workshop in collaboration with NSF WSU-GEARS "Managing the Conversion", Wayne State University, Detroit, MI (Dec 10)
- 2022 Chairs Summer Leadership Institute, Wayne State University, Detroit, MI (August 3)
- 2022 Fall 2022 Chair Workshop in collaboration with NSF WSU-GEARS "Faculty Workload: Challenges and Solutions", Wayne State University, Detroit, MI (Oct 12)
- 2023 Chairs Summer Leadership Institute, Wayne State University, Detroit, MI (July 21)

**Professional Awards and Recognitions:**

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- 1984 Merit Scholarship, University of Mississippi
- 1994 Recipient, College on Problems of Drug Dependence Travel Award
- 1995 Research Trainee, Pharmacology & Toxicology, Medical College of Virginia
- 1995 Recipient, NIDA Postdoctoral National Research Service Award
- 1996 Recipient, NIDA Director's Travel Award Recipient
- 2005 Recipient, Wayne State University (WSU) Graduate Research Assistant Competition
- 2008 Presidential Research Highlighted in WSU President's Report
- 2009 Recipient, Fellow status in Division 28, American Psychological Association
- 2010 Recipient, New Faculty Mentor Award (Mentoring Dr. Michelle Tomaszynski)
- 2011 Recipient, WSU CLAS Award for Excellence in Teaching
- 2011 Recipient, American Psychological Association, Div. 28, Scientist "Spotlight"
- 2013 Recipient, Psi Chi Faculty Advisor Leadership Training Grant/Mortar Board's LEAD Advisor Development Program
- 2018 Recipient, WSU President's Award for Excellence in Teaching
- 2021 Visiting Fellow in AP Psychology

**Undergraduate Honors**

- University Honors Program, University of Mississippi
- Chancellor's List, University of Mississippi
- Outstanding College Students of America
- Golden Key National Honor Society
- Psi Chi, the International Honor Society in Psychology

**Professional Memberships:**

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Fellow, American Psychological Association, Division 28 (Psychopharmacology)

Member, College on the Problems of Drug Dependence

Member, Society for Neuroscience

Member, Society for Stimulus Properties of Drugs

Member, Neurobehavioral Teratology Society

Member and WSU Faculty Advisor, Psi Chi, The International Honor Society in Psychology

**Research Grants:**

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**Funded:**

"Response Contingent Behavioral Effects of Abused Solvents". Individual Postdoctoral Fellowship (National Research Service Award) -- Source: National Institute on Drug Abuse (F32DA005670). Project Period: 09/01/95-06/30/97. Total award (direct costs): \$54,020.

"Behavioral Studies of Opiate Tolerance and Dependence". Role: Co-Investigator. Source: National Institute on Drug Abuse (R01DA003796). Project Period: 07/01/2002-06/30/2004. Total award: \$1,328,953.00 (direct costs): \$1,250,000.00

"Self-administration of Abused Inhalants in Mice". Role: Principal Investigator. Source: National Institute on Drug Abuse (R01DA15095). Project Period: 04/01/2002-03/31/2005. Total award: \$457,250.00 (direct costs): \$300,000.00

"A Preclinical Model of Adolescent Toluene Abuse in Rats". Role: Principal Investigator. Source: National Institute on Drug Abuse (R21DA019151). Project Period: 09/30/2004-08/31/2007. Total award \$402,500.00 (direct costs): \$275,000.00

"Behavioral Effects of Gestational Inhalant Abuse in Rats". Role: Principal Investigator. Source: National Institute on Drug Abuse (R01DA15951). Project Period: 09/30/2002-06/30/2008. Total award: \$1,328,953.00 (direct costs): \$1,125,000.00

"Does Repeated Toluene Alter Ethanol's Properties". Role: Principal Investigator. Source: Psi Chi, The International Honor Society in Psychology. Project Period: 08/02/2011-06/01/2012. Total award (direct costs): \$1,650.00, no indirect.

"Inhaled Toluene-Produced Physical Dependence in Mice". Role: Principal Investigator. Source: Psi Chi, The International Honor Society in Psychology. Project Period: 08/02/2013-06/01/2014. Total award (direct costs): \$2,000.00, no indirect.

“A Preclinical Investigation of Cannabidiol Bioavailability and Behavioral Outcomes”. Role: Principal Investigator. Source: Ellipse Analytics, Denver, CO. Project Period: 08/01/2019-12/31/2020. Total award (direct costs): \$53,900.00.

“The effects of gestational opioid exposure on the maternal brain, behavior and microbiome”. Role: Co-Investigator (10% effort). Source: National Institute on Drug Abuse (R01DA 052386). Project Period: 07/01/2022-06/30/2027. Total award: \$1,854,495.00 (direct costs): \$1,250,000.00. (Susie Brummelte, PI).

**Intramural:**

Competitive Undergraduate Research Award for “Effects of Toluene on Biological Development in the Rat”. Role: Mentor to Michael Mohammadi. Source: Wayne State University. Project Period: Summer 2003. Total award (direct costs): \$2,500.

Competitive Undergraduate Research Award for “Long-term effects of postnatal exposure to toluene on spontaneous locomotor activity”. Role: Mentor to Agnieszka Shepard. Source: Wayne State University Honors Program. Project Period: Winter 2005. Total award (direct costs): \$2,750.

Competitive Undergraduate Research Award for “Long-term effects of prenatal exposure to toluene on measures of attention and hyperactivity”. Role: Mentor to Patrick Cooper. Source: Wayne State University Honors Program. Project Period: Spring/Summer 2006. Total award (direct costs): \$2,750.

Competitive Graduate Research Award for “Pharmacological and Behavioral Indices of Toluene Abuse” project. Role: PI & Mentor. Source: Wayne State University’s Graduate School and the Office of the Vice President for Research. Project Period: 08/18/2005-08/17/2006. Total award: ~\$28,000.

Competitive Undergraduate Research Award for “The Effects of Toluene Abuse on Spatial Learning and Memory”. Role: Mentor to Kevin P. Wood. Source: Wayne State University Honors Program. Project Period: Winter 2008. Total award (direct costs): \$2,750.

Competitive Bridge Funding Research Award for “Preclinical Investigations of Inhalant Abuse”. Role: PI. Source: Wayne State University Division of Research. Project Period: August 2008-December 2009. Total award (direct costs): \$35,000.

Competitive Undergraduate Research Award for “Does Repeated Exposure of Toluene Increase the Reinforcing Properties of Amphetamine?”, Role: Mentor to Andrew Reid. Source: Wayne State University Honors Program. Project Period: Winter 2011. Total award (direct costs): \$2,750.

[http://www.undergradresearch.wayne.edu/pdfs/winter\\_11\\_winners-final\\_1\\_.pdf](http://www.undergradresearch.wayne.edu/pdfs/winter_11_winners-final_1_.pdf)

Competitive Undergraduate Research Award for “Do Repeated Exposures of Toluene Increase the Sedative Effects of Alcohol?”. Role: Mentor to Hussein Beydoun. Source: Wayne State University Honors Program. Project Period: Winter 2011. Total award (direct costs): \$2,750.

[http://www.undergradresearch.wayne.edu/pdfs/winter\\_11\\_winners-final\\_1\\_.pdf](http://www.undergradresearch.wayne.edu/pdfs/winter_11_winners-final_1_.pdf)

Competitive Undergraduate Research Award for “Self-administration of Toluene in Adult Mice”, Role: Mentor to Philip Alther. Source: Wayne State University Honors Program. Project Period: Winter 2011. Total award (direct costs): \$2,750.

[http://www.undergradresearch.wayne.edu/pdfs/winter\\_11\\_winners-final\\_1\\_.pdf](http://www.undergradresearch.wayne.edu/pdfs/winter_11_winners-final_1_.pdf)

Competitive Undergraduate Research Award for “Does Repeated Toluene Exposure Alter Dopamine Neurochemistry and Receptor Density?” Role: Mentor to Kelsey Aulerich. Source: Wayne State University Honors Program. Project Period: Winter 2012. Total award (direct costs): \$2,750.

[http://www.undergradresearch.wayne.edu/pdfs/winter\\_12\\_winners-final\\_1\\_.pdf](http://www.undergradresearch.wayne.edu/pdfs/winter_12_winners-final_1_.pdf)

“A Mouse Model of Toluene Abstinence-Induced Anxiogenic Behavior” Role: Principal Investigator. Source: Betty Neitzel Memorial Award. Project Period: May 2016-April 2018. Total award (direct costs): \$10,000.

CURES Recruited Center Investigator, Career Development Program of the WSU Center for Urban Responses to Environmental Stressors (CURES). Role: Principal Investigator. November 2017-2019; Total direct costs: \$80,000

“An Investigation of Toluene use in Early Adolescence as a Moderator of Drug Induced Behavior in Early Adulthood” Role: Principal Investigator. Source: Betty Neitzel Memorial Award. Project Period: May 2018-April 2020. Total award (direct costs): \$15,000.

“Impact of perinatal opioid exposure on maternal care, neonatal brain activation and long-term behavioral outcome” Role: Co-Investigator with Susanne Brummelte. Source: Betty Neitzel Memorial Award. Project Period: 05/01/2020-04/31/2022. Total award (direct costs): \$15,000.

“Impact of cannabidiol on neuroplasticity, behavior and the microbiome” Role: Co-Investigator with Susanne Brummelte. Source: Betty Neitzel Memorial Award. Project Period: 05/01/2021-04/31/2023. Total award (direct costs): \$7,500.

“Assessment of GABAergic Involvement in Toluene-Induced Anxiolysis and Abstinence-Induced Anxiogenesis” Role: Principal Investigator. Source: Betty Neitzel Memorial Award. Project Period: 05/01/2022-04/31/2024. Total award (direct costs): \$7,500.

“CLAS Mid-Career Fund for Research Infrastructure and Development” Role: Principal Investigator. Source: Dean’s Office, College of Liberal Arts and Sciences. 08/2022. Total award (direct costs): \$20,000.

**Not Funded:**

“Pharmacological and Behavioral Indices of Toluene Abuse”. Role: Principal Investigator. Source: National Institute on Drug Abuse. Withdrawn April 2004.

“Neural injury in a preclinical model of gestational toluene abuse”. Role Co-Investigator, Principal Investigator – Graham Parker. Source: National Institute on Drug Abuse. Submitted October 2006.

“Opioid Ligands as pharmacotherapies for enhancement of cocaine extinction behavior”. Role Co-Investigator, Principal Investigator – Shane Perrine. Source: National Institute on Drug Abuse. Submitted February 2007.

“Opioid Ligands as pharmacotherapies for enhancement of cocaine extinction behavior”. Role Co-Investigator, Principal Investigator – Shane Perrine. Source: National Institute on Drug Abuse. Submitted October 2007.

“Evaluation of the Reinforcing and Discriminative Stimulus Effects of Abused Inhalants in Mice”. Role: Principal Investigator. Source: National Institute on Drug Abuse (1R01DA15095; Years 4-9). Submitted November 2007.

“Maternal Toluene Abuse and Body Weight Programming”. Role Co-Investigator, Principal Investigator – Patricia Jarosz. Source: National Institute on Drug Abuse. Submitted June 2008.

“Chemotherapy-induced Cognitive Dysfunction”. Role Co-Principal Investigator (along with Teresita Briones). Source: National Institute on Health. Submitted October 2011.

“A New Use for an Old Treatment: Radiation Therapy and Alzheimer's Disease”. Role Co-Principal Investigator (along with Brian Marples). Source: Alzheimer’s Association. Submitted February 2012.

“A Preclinical Model of the Behavioral and Neurochemical Effects of Toluene Abuse.” Role: Principal Investigator. Source: National Institute on Drug Abuse (1R01DA036546-1). Submitted February 2013.

“Evaluation of Synthetic Opioid Substances Using the Drug-Discrimination Assay in Rats”, Drug Enforcement Agency Solicitation Number: D-17-OD-0093. Submitted June 2017.

Evaluation of Synthetic Opioid Substances Using the Warm Water Analgesia Assay  
Solicitation Number: D-17-OD-0092. Submitted June 2017.

“Effects of Cannabis Use and Cannabinoids on the Developing Brain”. Role Co-Principal Investigator, Principal Investigator – Susanne Brummelte. Source: National Institute on Drug Abuse (PA-14-162). Submitted June 2017.

“The effects of gestational buprenorphine exposure on maternal behavior and the maternal brain network”. Role Co-Principal Investigator, Principal Investigator – Susanne Brummelte. Source: National Institute on Drug Abuse (PA-19-056). Submitted October 2019.

“The effects of gestational buprenorphine exposure on maternal behavior and the maternal brain network”. Role Co-Principal Investigator, Principal Investigator – Susanne Brummelte. Source: National Institute on Drug Abuse (PA-19-056). Resubmitted February 2020.

“Brain Targeted Nanoparticle Combination Therapy for Reversing Tauopathy and Immunotoxicity of Alzheimer's Disease”. Role Co-Principal Investigator, Principal Investigator – Samaresh Sau. Source: National Institute on Health (20-0724). Resubmitted February 2020.

### Invited Presentations/Workshops/Symposiums

Dates	Activity
October 1996	"Behavioral Pharmacology of Abused Inhalants", Department of Pharmacology & Toxicology, <b>Virginia Commonwealth University</b> , Richmond, VA.
May 1999	“A Direct Comparison of Inhalant Effects on Neurobehavioral Screening Methods and Schedule-Controlled Behavior in Mice”, <b>Behavioral Toxicology Society</b> , Raleigh/Durham, N.C.
November 1999	“A Whiff of Death: Volatile Solvent Abuse”, Psychiatry & Behavioral Neuroscience, <b>Wayne State University</b> , Detroit, MI.
January 2003	“Preclinical studies of inhaled solvent abuse”, <b>Cellular and Clinical Neurobiology</b> , <b>Wayne State University</b> , Detroit, MI.
September 2004	“Inhaled Solvent Abuse: Preclinical Pharmacology and Developmental Toxicity”, <b>Department of Applied Medical Sciences</b> , <b>University of Southern Maine</b> , Portland, ME.



- September 2005 “Abuse of Inhalants: Implications for Chemical Intolerance”, Addiction and Chemical Intolerance: A Shared Etiology? **NIEHS/NIAAAA/NIH Workshop**, Raleigh/Durham, NC.
- November 2005 Bowen, S.E. “Animal Models for Assessing the Effects of Maternal Inhalant Abuse”, Inhalant Abuse Among Children and Adolescents: Consultation on Building an International Research Agenda. **National Institute on Drug Abuse/Fogarty International Center**, Rockville, MD. <http://www.drugabuse.gov/international/inhalant-abuse-among-children-adolescents>
- November 2005 Bowen, S.E. “Inhaled Solvent Abuse: Abuse Liability of Reformulated Products”, Inhalant Abuse among Children and Adolescents: Consultation on Building an International Research Agenda. **National Institute on Drug Abuse/Fogarty International Center**, Rockville, MD. <http://www.drugabuse.gov/international/inhalant-abuse-among-children-adolescents>
- November 2005 Bowen, S.E. “Developmental Toxicity of Prenatal Exposure to Toluene”, Mechanisms of Toxicity, Toxicokinetics, and Medical Consequences of Drugs, Substances of Abuse and Aids. **NIDA/NIH Workshop**, Nashville, TN.
- February 2006 “A Rodent’s View to Understanding Inhalant Abuse”, **Department of Biological Sciences, Wayne State University**, Detroit, MI.
- June 2006 (Organizer, Chair, and Presenter) “Recent Advances in preclinical investigations of inhaled solvent abuse”, The Frontiers of Inhalant Abuse: Recent Advances in the Neurobiological Basis of Volatile Substance Abuse Symposium, **College on the Problems of Drug Dependence**, Scottsdale, AZ.
- December 2006 “Neurodevelopmental Toxicity of Toluene in Rats”, Causes and Consequences of Inhalant Abuse, **American College of Neuropsychopharmacology**, Hollywood, Fl.
- October 2007 “Get A Whiff of This: Recent Advances in Inhalant Abuse”, Institute of Environmental Health Sciences, **Wayne State University**, Detroit, MI.
- March 2010 “Giving Effective Poster Presentations”, Psi Chi, Department of Psychology, **Wayne State University**, Detroit, MI.

- March 2011 “Making Poster Presentations Work for You”, Psi Chi, Department of Psychology, **Wayne State University**, Detroit, MI. March 2010.
- June 2011 “Achievements and challenges in understanding the neuropharmacology of inhalant misuse” with Dr. Silvia Cruz. **College on the Problems of Drug Dependence**, Hollywood, Fl.
- August 2011 “Genetic influences on inhalant-induced psychomotor activation in mice”, APA Fellow Address, **American Psychological Association**, Washington, DC.
- January 2020 “Responsible Authorship and Publication”, at the **Responsible Conduct of Research Training Workshop**. WSU Graduate School, Wayne State University.
- January 2020 “Methods and Issues in Evaluating the Neurobehavioral Effects of Organic Solvents”, **Center for Urban Responses to Environmental Stressors (CURES)**. Integrative Health Sciences Facility Core.
- June 2022 “Behavioral Toxicology of Inhalants: Preclinical to Clinical Research”, **DNTS Philip J. Bushnell Symposium: The Continuing Importance of Behavioral Toxicology**. 46th Annual Meeting of the Developmental Neurotoxicology Society. Virtual meeting due to COVID pandemic.
- July 2023 “The Practical Chair”, Panelist at the **Chairs Summer Leadership Institute** workshop, Wayne State University, Detroit, MI.

#### News/Media Coverage/Contributions:

Dates	Activity
April 20, 2023	“Inhalant that contributed to Aaron Carter's death needs more regulation, advocates say”, NBC News. <a href="https://www.nbcnews.com/health/health-news/inhalant-involved-aaron-carter-death-regulation-rcna80641">https://www.nbcnews.com/health/health-news/inhalant-involved-aaron-carter-death-regulation-rcna80641</a>
January 2021	“The movement to relax ban on psychedelic drugs”, Downtown News Magazine, Birmingham/Bloomfield, Michigan. <a href="https://www.downtownpublications.com/single-post/the-movement-to-relax-ban-on-psychedelic-drugs">https://www.downtownpublications.com/single-post/the-movement-to-relax-ban-on-psychedelic-drugs</a> .

**University Service/Committee Memberships:**

<b>Dates</b>	<b>Activity</b>
2003-present	Psychology Space Committee
2003-2005	Psychology Undergraduate Committee
2005-2006	Clinical Neuropsychologist Search Committee
2005-2009	Faculty Research Advisory Committee, Division of Research, Wayne State University
2007	Reviewer, Office of Undergraduate Research and Creative Projects, Wayne State University
2007-present	Psi Chi Faculty Advisor (National Honor Society in Psychology), Wayne State University Chapter
2008-2018	Policy and Advisory Committee, Department of Psychology, Wayne State University
2009-2010	Senior Faculty Advisory Group, Office of the President, Wayne State University
2011-2012	Behavioral and Cognitive Neuroscience/Institute of Gerontology Search Committee
2012-2013	CLAS Teaching Award Selection Committee
2012-2013	Social Psychology search committee (2012-2013)
2012-2014	Salary and Personnel/Tenure and Promotion Committee
2014	Behavioral and Cognitive Neuroscience Search Committee
2016-2017	President's Award for Excellence in Teaching Committee
2017-2018	CLAS Faculty Council (resigned 3-year term to take Chair position)
2017-2018	Academic Senate (resigned 3-year term to take Chair position)
2019	Chair, Search Committee for Chair of Department of Communication Sciences and Disorders
2021-2023	Social Sciences Research Support Committee/Grant Reviewer
2021-2023	Age-Friendly University Steering Committee
2022-2023	WSU GEARS Chair Advisory Board
2023	WSU Quality Online Faculty Fellows Grant Reviewer

**National Accreditation Service:**

<b>Dates</b>	<b>Activity</b>
April 2012	American Psychological Association Accreditation Site Team Visit to Illinois State University, Normal, Illinois
April 2013	American Psychological Association Accreditation Site Team Visit to LaSalle University, Philadelphia, Pennsylvania
August 2018	American Psychological Association Accreditation Site Team Visit to Purdue University, West Lafayette, Indiana

October 2019	American Psychological Association Accreditation Site Team Visit to University of Nebraska, Lincoln, Nebraska
November 2020	American Psychological Association Accreditation Site Team Visit to The Chicago School of Professional Psychology, Irvine, CA Campus (Virtual site visit due to COVID-19 pandemic).
February 2022	American Psychological Association Accreditation Site Team Visit to Duke University, Durham, NC (Virtual site visit due to COVID-19 pandemic).

**Editorial Board Membership:**

<b>Dates</b>	<b>Activity</b>
2006-2011	Editorial Board, <i>Neurotoxicology and Teratology</i>

**Reviewer Service:**

<b>Dates</b>	<b>Activity</b>
2004-2005	Expert Reviewer, Superfund Research Program, National Institute of Environmental Health Sciences, National Institute of Health
2005	Reviewer, Academic Textbook on Drug Abuse, Enslow Publishers, Inc.
October 2006	Ad hoc reviewer, <b>Biobehavioral Regulation, Learning and Ethology Study Section</b> , Center for Scientific Review, National Institutes of Health.
April 2007	Expert Reviewer, <b>Rodent Drug Discrimination and Locomotor Activity Testing for NIDA</b> , National Institutes of Health.
April 2007	Expert Reviewer, <b>Toxicological Review of 1,1,1-Trichloroethane Study Section</b> , U.S. Environmental Protection Agency. <a href="http://www.epa.gov/iris/toxreviews/0197tr.pdf">http://www.epa.gov/iris/toxreviews/0197tr.pdf</a>
February 2012	Reviewer, Academic Textbook on Drug Abuse, Oxford University Press
May 2013	Reviewer, Academic Textbook on Drug Abuse, Oxford University Press
November 2013	Reviewer, Academic Textbook on Drug Abuse, Oxford University Press
August 2012	Expert Reviewer, <b>Rodent Testing to Identify Pharmacotherapies for Substance Dependence</b> , N01DA-8908
September 2014	Expert Reviewer, <b>Toxicological Profile for Toluene</b> , U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry.
October 2019	Expert Reviewer, <b>Product-Chemical Profile for Nail Products Containing Toluene</b> , California EPA. Office of Research, Planning and Performance, Sacramento, California.

**Journals** (<https://www.reviewerrecognition.elsevier.com/#/profile/78595388-e36f-491b-b672-a2912917d3f8>):

1999-present	Ad hoc reviewer, <i>Psychopharmacology</i>
2000-present	Ad hoc reviewer, <i>Pharmacology, Biochemistry and Behavior</i>
2000-present	Ad hoc reviewer, <i>Neurotoxicology and Teratology</i>
1999-present	Ad hoc reviewer, <i>Drug and Alcohol Dependence</i>
2009-present	Ad hoc reviewer, <i>Toxicological Sciences</i>
2009-present	Ad hoc reviewer, <i>Life Sciences</i>
2009-present	Ad hoc reviewer, <i>Behavioural Brain Research</i>
2010-present	Ad hoc reviewer, <i>Neuropsychopharmacology</i>
2015-present	Ad hoc reviewer, <i>Substance Use and Misuse</i>
2015-present	Ad hoc reviewer, <i>Human &amp; Experimental Toxicology</i>
2020-present	Ad hoc reviewer, <i>Brain Research</i>

### Teaching Service:

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#### 1. Wayne State University (Detroit, MI)

Undergraduate: *Drugs, Behavior, and Society: PSY2080*  
 F'03;F'04;W'05;F'05;F'06;W'07;F'07;W'08(2 sections);  
 F'08;W'09;S'09;F'09, W'10, F'10, W'11, F'11, W'12, W'13, F'13, W'14,  
 W'15, F'15, W'16, F'17, W'18

*Brain and Behavior: PSY3040*  
 W'09

*Sensation and Perception: PSY3120*  
 F'15, W'17, F'17

*Directed Research: PSY4990*  
 Regularly since 2001

Graduate: *Models and Methods in Psychopharmacology: PSY8560*  
 W'06, W'08, W'11, W'14, F'17

*Psychopharmacology: PSY 8070*  
 F'13, F'18

#### 2. Virginia Commonwealth University (Richmond, VA)

Undergraduate: *Sensation and Perception: PSYC406*  
 W'95;F'95;W'96;S'96;F'96;W'97

*Directed Research*  
 F'95;W'96;F'96;W'97

#### 3. University of Richmond (Richmond, VA)

Undergraduate: *Motivation and Emotion*



- Chela Wallin Director of Research, Development, and Quality Ellipse Analytics (2021- present);  
 Thesis: *Gestational Opioid Exposure and Neonatal Abstinence Syndrome: Effects on Pregnancy Behavior & Neurodevelopment* (Proposed March 2018; December 2019)  
 Dissertation: *Opioid Use During Pregnancy: Effects of Buprenorphine & Morphine on the Maternal Brain & Initiation of Maternal Behavior* (Proposed December 2020; Defended April 18, 2023)
- Drew Svenson  
 Thesis: *Effects of Binge-Like Toluene Exposure on Lung and Brain Tissue* (Proposed January 2020; Defended April 2021)  
 Dissertation: *GABAergic Mediation of Abstinence-induced Anxiety Following Repeated Binge-Pattern Toluene Exposure in a Murine Model* (Proposed April 26, 2022; Defended July 10, 2023)
- Jordan Skully  
 Thesis: *Investigation into the effects Cannabidiol on Rats behavior* (Proposed January 2019; July 12, 2021)
- Abi Myers  
 Thesis: *The Effects of Gestational Buprenorphine and Morphine on Offspring Development* (Proposed December 2020; Defended December 14, 2021)

## 2. Served as Committee Member of Graduate Study

- |                   |   |
|-------------------|---|
| Awantika Deshmukh | Master's Thesis (2004-2005)                           |
| Casey Greer       | Master's Thesis (2006-2007)                           |
| Catherine Spuz    | Master's Thesis (2007-2009); Dissertation (2009-2010) |
| Elena Schifirnet  | Master's Thesis (2007-2009); Dissertation (2009-2010) |
| Erin Ondercin     | Master's Thesis (2010-2011)                           |
| Johnna Birbeck    | Master's Thesis (2009-2010); Dissertation (2011-2013) |
| Yiqin Yang        | Dissertation (2011-2012)                              |
| Aaron Apawu       | Dissertation (2012-2014)                              |
| Jessica Thompson  | Master's Thesis (2011-2012); Dissertation (2013-2014) |
| Sean Callan       | Master's Thesis (2013-2014); Dissertation (2014-2016) |
| Sean Mooney-Leber | Dissertation (2016-2017)                              |
| Brian Timmerman   | Master's Thesis (2018-2020)                           |

### 3. Served as Director of Undergraduate Study

- Richard Ban (2003) *Changes in gait and locomotor activity following acute and repeated toluene exposure.*
- Mike Mohammadi (2003) *Effects of Toluene on Biological Development in the Rat.*  
**Awarded WSU Undergraduate Research Grant**  
Matriculated into graduate program –  
Department of Physiology (Neuroscience)  
School of Medicine, University of Maryland
- Loris Abdel-Nour (2003) *Effects of Toluene on Biological Development in the Rat.*  
**Attending** Wayne State University School of Medicine
- Ivonne Calito (2004) *Gait abnormalities due to prenatal toluene exposure.*
- Faith Fletcher (2004) *Abuse patterns of gestational toluene inhalation and early postnatal development in rats.*
- Whitney Harris (2004) *Prenatal Exposure to Toluene Alters Development in Rats.*
- Agnieszka Stumska (2005) *Long-term effects of postnatal exposure to toluene on spontaneous locomotor activity.*  
**Awarded WSU Undergraduate Research Grant**
- Joe Howells (2005) *Effects of Neonatal Toluene Exposure on Gait in Rats.*
- James Robertson (2005) *Alterations in postnatal locomotor behavior following gestational toluene exposure*
- Amy Kohl (2005) *The effects of toluene exposure on juvenile, adolescent and young adult rats on weight gain*
- Jennifer VanNuil (2006) *Changes in locomotor activity following repeated gestational toluene exposures in rats*
- Patrick Cooper (2006) *Prenatal Exposure to Toluene Alters Attention and Impulsive Behavior in Rats in a "Waiting-for-Reward" Task*  
**Awarded WSU Undergraduate Research Grant**
- Brandi Walker (2006) *Comparison of Amphetamine and Toluene in a 2-key Drug Discrimination Assay*



- Timothy Smith (2007) *Self-administration of inhaled toluene in mice*  
 Kevin Wood (2008) *The Effects of Toluene Abuse on Spatial Learning and Memory*  
**Awarded WSU Undergraduate Research Grant**
- Andrzej J Burkat (2008) *Effects of Prenatal Amphetamine Exposure on Attention and Impulsivity*
- David Peters (2008) *Amphetamine-like effects of Abused Inhalants*
- Jennifer Sills (2008) *Investigations into the discriminative stimulus effects of Abused Inhalants*
- Adrienne Stefanski (2009) *The effect of prenatal toluene exposure on skeletal abnormality*
- Andrew Reid (2011) *Does Repeated Exposure of Toluene Increase the Reinforcing Properties of Ethanol?*
- Hussein Beydoun (2011) *Do Repeated Exposures of Toluene Increase the Sedative Effects of Alcohol?*
- Philip Alther (2011) *Self-administration of toluene in adult mice*
- Brigid McCullough (2011) *Repeated toluene exposures result in locomotor changes to toluene but not ethanol*
- Kelsey Aulerich (2012) *Does Repeated Toluene Exposure Alter Dopamine Neurochemistry and Receptor Density?*
- Joseph Lombardo (2014) *Neonatal Exposure to Toluene Disrupts Step Angle: Evidence for Cerebellar Disruption in a Rat Model of Fetal Solvent Syndrome* **1st place, CLAS/WSU Showcase Poster Contest**

### **Research Experience**

(2029 Google Scholar Citations, h-index 26, i10-index 48 as of 01/01/2022)

**Publications: [Peer-reviewed articles]      Underlined/italics denotes student authors**

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### **Book Chapters:**

1. Cruz, S.L. & **Bowen S.E.** (2008). Inhalant Abuse. In M.M. Ubach & R. Mondragon-Ceballos (Eds.), Neural Mechanisms of Action of Drugs of Abuse and Natural Reinforcers (pp 1-27). Kerala, India: Research Signpost.  
<http://www.ressign.com/UserBookDetail.aspx?bkid=745&catid=175#>

2. **Bowen S.E.** & Cruz, S.L. (2014). Inhalants: Addiction and toxic effects in the human. In: B. Madras & M. Kuhar (Eds.), *The Effects of Drug Abuse on the Human Nervous System* (pp 553-569). Oxford, UK: Academic Press. <https://www.elsevier.com/books/the-effects-of-drug-abuse-on-the-human-nervous-system/madras/978-0-12-418679-8>
3. **Bowen, S.E.**, Howard, M.O. & Garland, E. L. (2016). Chapter 85: Inhalant Use Disorders in the United States. In V.R. Preedy (Ed), *Neuropathology of Drug Addictions and Substance Misuse*. Academic Press (pp 931-942).  
<http://www.sciencedirect.com/science/article/pii/B9780128002124000856>
4. Howard, M.O., **Bowen, S.E.**, & Garland, E.L. (2017). Inhalant use disorders. In A.E. Wenzel (Ed.), *The Sage Encyclopedia of Abnormal and Clinical Psychology*. New York: Sage Publications (Vol 1; pp 1800-1802). ISBN 1483365832  
[https://www.google.com/books/edition/The\\_SAGE\\_Encyclopedia\\_of\\_Abnormal\\_and\\_Cl/p\\_s6aDgAAQBAJ?hl=en&gbpv=1](https://www.google.com/books/edition/The_SAGE_Encyclopedia_of_Abnormal_and_Cl/p_s6aDgAAQBAJ?hl=en&gbpv=1)
5. Howard, M.O., **Bowen, S.E.**, & Garland, E.L. (2017). Inhalant-related disorders. In B.J. Sadock, V.A. Sadock, & Ruiz, P. (Eds), *Comprehensive Textbook of Psychiatry*, 10th Edition. Lippincott Williams & Wilkins, Baltimore, MD. ISBN 978-1-45-110047-1.  
<https://www.ovid.com/product-details.761.html>
6. Davidson, C.J., Svenson, D.W., & **Bowen, S.E.** (In Press). Inhalant-related disorders. In B.J. Sadock, V.A. Sadock, & Ruiz, P. (Eds), *Comprehensive Textbook of Psychiatry*, 11th Edition. Lippincott Williams & Wilkins, Baltimore, MD.

### **Published Articles:**

7. **Bowen, S.E.**, Fowler, S.C. & Kallman, M.J. (1993). Effects of variation in chronic dose of cocaine on contingent tolerance as assessed in a milk-drinking task. *Psychopharmacology*, 113, 67-75. [doi:10.1007/bf02244336](https://doi.org/10.1007/bf02244336)
8. Fowler, S.C., **Bowen, S.E.** & Kallman, M.J. (1993). Practice-augmented tolerance to triazolam: evidence from an analysis of operant response durations and interresponse times. *Behavioral Pharmacology*, 4(2), 147-158. PMID: 11224181.  
[https://journals.lww.com/behaviouralpharm/Abstract/1993/04000/Practice\\_augmented\\_tolerance\\_to\\_triazolam.7.aspx](https://journals.lww.com/behaviouralpharm/Abstract/1993/04000/Practice_augmented_tolerance_to_triazolam.7.aspx)
9. Jackson, D.E. & **Bowen, S.E.** (1994). Prewatering and haloperidol have similar effects on rats' response rate and duration. *Pharmacology Biochemistry and Behavior*, 47 (3), 761-763. [doi:10.1016/0091-3057\(94\)90187-2](https://doi.org/10.1016/0091-3057(94)90187-2)
10. **Bowen, S.E.** & Balster, R.L. (1996). Effects of inhaled 1,1,1-trichloroethane on locomotor activity in mice. *Neurotoxicology and Teratology*, 18 (1), 77-81.  
[doi:10.1016/0892-0362\(95\)02024-1](https://doi.org/10.1016/0892-0362(95)02024-1)

11. **Bowen, S.E.**, Wiley, J.L., Evans, E.B., Tokarz, M.E. & Balster, R.L. (1996). Functional observation battery comparing effects of ethanol, 1,1,1-trichloroethane, ether and flurothyl. Neurotoxicology and Teratology, 18 (5), 577-585. [doi:10.1016/0892-0362\(96\)00064-5](https://doi.org/10.1016/0892-0362(96)00064-5)
12. **Bowen, S.E.**, Wiley, J.L. & Balster, R.L. (1996). The effects of abused inhalants on mouse behavior in an elevated plus-maze. European Journal of Pharmacology, 312, 131-136. [doi:10.1016/0014-2999\(96\)00459-1](https://doi.org/10.1016/0014-2999(96)00459-1)
13. **Bowen, S.E.** & Balster, R.L. (1997). A comparison of the acute behavioral effects of inhaled amyl, ethyl, and butyl acetate in mice. Fundamental and Applied Toxicology, 35, 189-196. [doi:10.1006/faat.1996.2278](https://doi.org/10.1006/faat.1996.2278)
14. **Bowen, S.E.** & Balster, R.L. (1997). Desflurane, enflurane, isoflurane, and ether produce ethanol-like discriminative stimulus effects in mice. Pharmacology Biochemistry and Behavior, 57, 191-198. [http://dx.doi.org.proxy.lib.wayne.edu/10.1016/S0091-3057\(96\)00308-5](http://dx.doi.org.proxy.lib.wayne.edu/10.1016/S0091-3057(96)00308-5)
15. Balster, R.L., **Bowen, S.E.**, Evans, E.B., Wiley, J.L. & Tokarz, M. (1997). Evaluation of the acute behavioral effects and abuse potential of a C8-C9 isoparaffin solvent. Drug and Alcohol Dependence, 46(3), 125-13.
16. Wiley, J.L., *Golden, K.M.* & **Bowen, S.E.** (1997). Effects of modulation of nitric oxide on acoustic startle responding and prepulse inhibition in rats. European Journal of Pharmacology, 328, 125-130. [doi:10.1016/S0014-2999\(97\)83038-5](https://doi.org/10.1016/S0014-2999(97)83038-5)
17. **Bowen, S.E.** & Balster, R.L. (1998). A method for adjusting exposure levels of volatile solvents based on effects on schedule-controlled behavior. Neurotoxicology and Teratology, 20 (2), 1-12. [doi:10.1016/S0892-0362\(97\)00092-5](https://doi.org/10.1016/S0892-0362(97)00092-5)
18. **Bowen, S.E.** & Balster, R.L. (1998). A direct comparison of inhalant effects on locomotor activity and schedule-controlled behavior in mice. Experimental and Clinical Psychopharmacology, 6(3), 235-247. <http://psycnet.apa.org/index.cfm?fa=search.displayRecord&uid=1998-04990-001>
19. **Bowen, S.E.** & Balster, R.L. (1998). The effects of inhaled isoparaffins on locomotor activity and operant performance in mice. Pharmacology Biochemistry and Behavior, 61 (3), 271-280. [http://dx.doi.org/10.1016/S0091-3057\(98\)00108-7](http://dx.doi.org/10.1016/S0091-3057(98)00108-7)
20. **Bowen, S.E.**, Daniel, J. & Balster, R.L. (1999). Deaths associated with inhalant abuse in Virginia from 1987 to 1996. Drug and Alcohol Dependence, 53, 239-245. PMID: 10080050, [http://dx.doi.org/10.1016/S0376-8716\(98\)00139-2](http://dx.doi.org/10.1016/S0376-8716(98)00139-2)
21. **Bowen, S.E.**, Wiley, J.L., *Jones, H.E.* & Balster, R.L. (1999). Phencyclidine- and diazepam-like discriminative stimulus effects of inhalants in mice. Experimental and

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23. Varvel, S.A., James, J.R., **Bowen, S.E.**, Rosecrans, J.A. & Karan, L.D. (1999). Discriminative stimulus (ds) properties of nicotine in the c57bl/6 mouse. Pharmacology Biochemistry and Behavior, 63 (1), 27-32. PMID: 10340520, [doi:10.1016/S0091-3057\(98\)00262-7](https://doi.org/10.1016/S0091-3057(98)00262-7)
24. **Bowen, S.E.**, Fowler, S.C., Stanford, J. & Kallman, M.J. (2000). Behavioral tolerance to the force differentiation effects of diazepam and midazolam in rats. Psychopharmacology, 148 (4), 327-335. PMID: 10928303,  
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26. Moser, V.C., **Bowen, S.E.**, Li, A.A., Sette, W.S. & Weisenburger, W.P. (2000). Cognitive evaluation: is it needed in neurotoxicity screening? Neurotoxicology and Teratology, 22 (6), 785-798. PMID: 11188757, [doi:10.1016/S0892-0362\(00\)00105-7](https://doi.org/10.1016/S0892-0362(00)00105-7)
27. Wiley, J.L., **Bowen, S.E.** & Balster, R.L. (2001). Effects of volatile inhalants on sensorimotor reactivity in rats. Addiction Biology, 6, 35-43.  
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28. **Bowen, S.E.**, Batis, J.C., Mohammadi, M. & Hannigan, J.H. (2005). Abuse pattern of gestational toluene exposure and early postnatal development in rats. Neurotoxicology and Teratology, 27(1), 105-116. PMID: 15681125,  
<http://dx.doi.org/10.1016/j.ntt.2004.09.007>
29. **Bowen, S.E.** & Balster, R.L. (2006). Tolerance and sensitization to inhaled 1,1,1-trichloroethane in mice: results from open-field behavior and a functional observational battery. Psychopharmacology, 185, 405-415. PMID: 16541244,  
<http://dx.doi.org/10.1007/s00213-006-0335-1>
30. **Bowen, S.E.** (2006). Increases in amphetamine-like discriminative stimulus effects of the abused inhalant toluene in mice. Psychopharmacology, 186, 517-524. PMID: 16601996,  
<http://dx.doi.org/10.1007/s00213-006-0381-8> **Highlighted in 2008 NIDA NOTES, Vol 21, No. 6, "Animal Studies Elaborate Toluene's Effects".**  
[http://www.nida.nih.gov/NIDA\\_notes/NNvol21N6/animal.html](http://www.nida.nih.gov/NIDA_notes/NNvol21N6/animal.html)

31. **Bowen, S. E.**, *Batis, J. C., Paez-Martinez, N.* & Cruz, S. (2006). The last decade of solvent research in animal models of abuse: mechanistic and behavioral studies. *Neurotoxicology and Teratology*, 28(6), 636-647. PMID: 17064879, <http://dx.doi.org/10.1016/j.ntt.2006.09.005>
32. **Bowen, S.E.**, *Mohammadi, M., Batis, J.C.* & Hannigan, J.H. (2007). Gestational toluene exposure effects on spontaneous and amphetamine-induced locomotor behavior in rats. *Neurotoxicology and Teratology*, 29, 236-246. PMID: 17112700, <http://dx.doi.org/10.1016/j.ntt.2006.09.027>
33. *O'Leary-Moore, S.K.*, Galloway, M.P., McMechan, A.P., Hannigan, J.H. & **Bowen, S.E.** (2007). Region-dependent alterations in glutamate and gaba measured by high-resolution magnetic resonance spectroscopy following acute binge inhalation of toluene in juvenile rats. *Neurotoxicology and Teratology*, 29, 466-475. PMID: 17466488, <http://dx.doi.org/10.1016/j.ntt.2007.03.062>
34. **Bowen, S.E.**, Hannigan, J.H., & Irtenkauf, S. (2007). Maternal and Fetal Blood and Organ Toluene Levels in Rats Following Acute and Repeated Binge Inhalation Exposure. *Reproductive Toxicology*, 24(3-4), 343-52. PMID: 17669620, <http://dx.doi.org/10.1016/j.reprotox.2007.06.005>
35. **Bowen, S.E.**, *Charlesworth, J.D.*, Tokarz, M.E., *Wright, M.J.*, & Wiley, J.L. (2007). Decreased Sensitivity in Adolescent versus Adult Rats to the Locomotor Activating Effects of Toluene. *Neurotoxicology and Teratology*, 29(6), 599-606. PMID: 17869480, <http://dx.doi.org/10.1016/j.ntt.2007.08.001>
36. Jarosz, P.A., *Fata, E.*, **Bowen, S.E.**, Jen, C.K-L, & Coscina, D.V. (2008). Effects of Abuse Pattern of Gestational Toluene Exposure on Metabolism, Feeding, and Body Composition. *Physiology and Behavior*, 93, 984-993. PMID: 18272189, <http://dx.doi.org/10.1016/j.physbeh.2007.12.016>
37. **Bowen, S.E.** (2009). Time-Course of the Ethanol-like Discriminative Stimulus Effects of Abused Inhalants in Mice. *Pharmacology, Biochemistry, and Behavior*, 91(3), 345-350. PMID: 18722399, <http://dx.doi.org/10.1016/j.pbb.2008.08.005>
38. **Bowen, S.E.**, & *McDonald, P.* (2009). Abuse pattern of Toluene Exposure Alters Mouse Behavior in a Waiting-for-Reward Operant Task. *Neurotoxicology and Teratology*, 31, 18-25. PMID: 18832024, <http://dx.doi.org/10.1016/j.ntt.2008.09.002>
39. **Bowen, S.E.**, Hannigan, J.H., & *Cooper, P.B.* (2009). Abuse Pattern of Gestational Toluene Exposure Alters Behavior in Rats in a "Waiting-for-Reward" Task. *Neurotoxicology and Teratology*, 31(2), 89-97. PMID: 19041938, <http://dx.doi.org/10.1016/j.ntt.2008.11.002>

40. **Bowen, S.E.**, Irtenkauf, S., Hannigan, J.H., and *Stefanski, A.L.* (2009). Alterations in Fetal Morphology Following Abuse Patterns of Toluene Exposure. Reproductive Toxicology, 27(2), 161-169. PMID: 19429395, <http://dx.doi.org/10.1016/j.reprotox.2009.01.002>
41. *O'Leary-Moore, S.K.*, Galloway, M.P., McMechan, A., Irtenkauf, S., Hannigan, J.H., and **Bowen, S.E.** (2009). Neurochemical Changes after Acute Binge Toluene Inhalation in Adolescent and Adult Rats: A High-Resolution Magnetic Resonance Spectroscopy Study. Neurotoxicology and Teratology, 31(6), 382-389. PMID: 19628036, <http://doi:10.1016/j.ntt.2009.07.005>
42. **Bowen, S.E.**, *Kimar, S.*, and Irtenkauf, S. (2010). Comparison of toluene-induced locomotor activity in Four Mouse Strains. Pharmacology, Biochemistry, and Behavior, 95, 249-257. PMID: 20138905, <http://doi:10.1016/j.pbb.2010.01.014>
43. *Batis, J.C.*, Hannigan, J.H., and **Bowen, S.E.** (2010). Differential effects of inhaled toluene on locomotor activity in adolescent and adult rats. Pharmacology, Biochemistry, and Behavior, 96, 438-448. PMID: 20624418, <http://dx.doi.org/10.1016/j.pbb.2010.07.003>
44. Perrine, S.A., *O'Leary-Moore, S.K.*, Galloway, M.P., Hannigan, J.H., and **Bowen, S.E.** (2011). Binge Toluene Exposure Alters Glutamate, Glutamine and GABA in the Adolescent Rat Brain as Measured by Proton Magnetic Resonance Spectroscopy. Drug and Alcohol Dependence, 115, 101-106. PMID: 21126832, <http://dx.doi.org/10.1016/j.drugalcdep.2010.11.001>
45. Conti, A.C., *Lowing, J.L.*, Susick, L.L., and **Bowen, S.E.** (2012). Investigation of Calcium-stimulated Adenylyl Cyclases 1 and 8 on Toluene and Ethanol Neurobehavioral Actions. Neurotoxicology and Teratology, 34, 481-488. PMID: 22789433, <http://dx.doi.org/10.1016/j.ntt.2012.06.005>
46. **Bowen, S.E.**, and Hannigan, J.H. (2013). Binge Toluene Exposure in Pregnancy and Pre-weaning Developmental Consequences in Rats. Neurotoxicology and Teratology, 38, 29-35. PMID: 23597557 <http://dx.doi.org/10.1016/j.ntt.2013.04.002>
47. Tomaszycski, M.L., *Aulerich, K.*, and **Bowen, S.E.** (2013). Repeated Toluene Exposure Increases C-Fos in Catecholaminergic Cells of the Nucleus Accumbens Shell. Neurotoxicology and Teratology, 40, 28-34. PMID: 24036183 <http://dx.doi.org/10.1016/j.ntt.2013.09.001>
48. *Schifirnet, E.*, **Bowen, S.E.**, and Borszcz, G.S. (2014). Separating Analgesia from Reward within the Ventral Tegmental Area. Neuroscience, 263, 72-87. PMID: 24434773 <http://dx.doi.org/10.1016/j.neuroscience.2014.01.009>
49. *López-Rubalcava, C.*, *Chávez-Alvarez, K.*, *Huerta-Rivas, A.G.*, *Páez-Martínez, N.*, **Bowen, S.E.**, and Cruz, S.L. (2014). Long-term Behavioral Consequences of Prenatal

- Binge Toluene Exposure in Adolescent Rats. *Journal of Drug and Alcohol Research*, 3, 1-9. <http://www.ashdin.com/journals/JDAR/235841.pdf>
50. *Apawu, A.*, Mathews, Tiffany, and **Bowen, S.E.** (2015). Striatal Dopamine Dynamics in Mice Following Acute and Repeated toluene exposure. *Psychopharmacology*, 232, 173-184. PMID: 24994552 <http://link.springer.com/article/10.1007%2Fs00213-014-3651-x>
51. *Callan, S.P., Kott, J.M., Cleary, J.P., McCarthy, M.K., Baltes, B.B., Bowen, S.E.* (2016). Changes in Developmental Body Weight as a Function of Toluene Exposure: A Meta-Analysis of Animal Studies. *Human & Experimental Toxicology*, 35(4), 341-352. <http://het.sagepub.com/content/35/4/341.full.pdf?ikey=wnLboE8y2DeUiee&keytype=finite>
52. Marples, B., McGee, M., *Callan, S.*, **Bowen, S.E.**, Thibodeau, B.J., Michael, D.B., Wilson, G.D., Maddens, M.E., Fontanesi, J., and Martinez, AA. (2016). Cranial irradiation significantly reduces beta amyloid plaques in the brain and improves cognition in a murine model of Alzheimer's disease (AD). *Radiotherapy and Oncology*, 118(1), 43-51. <http://dx.doi.org/10.1016/j.radonc.2015.10.019>
53. *Callan, S.P.*, Hannigan, J.H., and **Bowen, S.E.** (2017). Prenatal Toluene Exposure Impairs Performance in the Morris Water Maze in Adolescent Rats. *Neuroscience*, 342, 180-187. PMID: 26318334. <http://dx.doi.org/10.1016/j.neuroscience.2015.08.050>
54. *Callan, S.P.*, Apawu, A.K., Mathews, T.A., and **Bowen, S.E.** (2017). Toluene's effects on activity and extracellular dopamine in the mouse are altered by GABAA antagonism. *Neuroscience Letters*, 647, 67-71. <http://dx.doi.org/10.1016/j.neulet.2017.03.004>
55. **Bowen, S.E.**, Hannigan, J.H., *Davidson, C. and Callan, S.P.* (2018). Abstinence Following Toluene Exposure Increases Anxiety-Like Behavior in Mice. *Neurotoxicology and Teratology*, 65, 42-50. PMID: 29292231. <https://doi.org/10.1016/j.ntt.2017.12.010>
56. *Wallin, C.M., Bowen, S.E., Roberge, C.L., Richardson, L.M., Brummelte, S.* (2019) Gestational buprenorphine exposure: Effects on pregnancy, development, neonatal opioid withdrawal syndrome, and behavior in a translational rodent model. *Drug and Alcohol Dependence*, 205, 1-11. <https://doi.org/10.1016/j.drugalcdep.2019.107625>
57. *Apawu, A.K., Callan, S.P.*, Mathews, T.A., and **Bowen, S.E.** (2020). Repeated Toluene Exposure Leads to Neuroadaptation in Dopamine Release Mechanisms within the Nucleus Accumbens Core. *Toxicology and Applied Pharmacology*. <https://doi.org/10.1016/j.taap.2020.115260>

58. *Davidson, C.J.*, Hannigan, J.H., and **Bowen, S.E.** (2021). Effects of Inhaled Combined Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX): Toward an Environmental Exposure Model. *Environmental Toxicology and Pharmacology*.  
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59. *Davidson, C., Svenson, D.*, Hannigan, J., Perrine, S. and **Bowen, S.E.** (2021). A Novel Preclinical Model of Environment-like Combined Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) Exposure: Behavioral and Neurochemical Findings. *Neurotoxicology and Teratology*. <https://doi.org/10.1016/j.ntt.2022.107076>
60. *Svenson, D.W., Davidson, C.J.*, Thakur, C., and **Bowen, S.E.** (2022). Acute Exposure to Abuse-Like Concentrations of Toluene Induces Inflammation in Mouse Lungs and Brain. *Journal of Applied Toxicology*. <https://doi.org/10.1002/jat.4285>

### Invited Papers/Reviews

61. **Bowen, S.E.** & Hannigan, J.H. (2006). Developmental Toxicity of Prenatal Exposure to Toluene. *The AAPS Journal*, 8(2), E419-E424. [**Electronic:** <http://www.aapsj.org> American Association of Pharmaceutical Scientists Journal].
62. Hannigan, J.H. and **Bowen, S.E.** (2010). Reproductive Toxicology and Teratology of Abused Toluene. *Systems Biology in Reproductive Medicine*, 56, 184-200.  
[doi:10.3109/19396360903377195](https://doi.org/10.3109/19396360903377195)
63. **Bowen, S.** (2011). Two Serious and Challenging Medical Complications Arising from Inhalant Abuse: Sudden Sniffing Death and Fetal Solvent Syndrome. *Substance Use & Misuse*, 46, 68-72. <http://dx.doi.org/10.3109/10826084.2011.580220>
64. Howard, M.O., **Bowen, S.E.**, Perron, B.E., and Vaughn, M.G. (2011). Inhalant Use and Inhalant Use Disorders in the United States. *Addiction Science & Clinical Practice*, 6(1), 18-31. <http://www.ncbi.nlm.nih.gov/pubmed/22003419>
65. *Wallin, C.M.*, **Bowen, S.E.**, and Brummelte, S. (2021). Opioid use during pregnancy can impair maternal behavior and the Maternal Brain Network: A literature review. *Neurotoxicology and Teratology*, 86, 1-17. PMID: 33812002  
<http://dx.doi.org/10.1016/j.ntt.2021.106976>



66. Cruz, S.L. and **Bowen, S.E.** (2021). The last two decades on preclinical and clinical research on inhalant effects. Neurotoxicology and Teratology, 87, 1-19. PMID: 34087382; DOI: <http://dx.doi.org/10.1016/j.ntt.2021.106999>

### Other Publications:

67. Marples, B., McGee, M, Callan, S., **Bowen, S.E.**, Thibodeau, B.J., Michael, D.B., Wilson, G.D., Maddens, M.E., Fontanesi, J., and Martinez, AA. (2016). Response to Garbitto et al. (2016) letter re: Cranial irradiation significantly reduces beta amyloid plaques in the brain and improves cognition in a murine model of Alzheimer's disease (AD). Radiotherapy and Oncology. Mar; 118(3):577-8.  
<http://dx.doi.org/10.1016/j.radonc.2016.01.008>

### Under Review/Revision:

NA

### Presentations and Published Abstracts: Underlined/italics denotes student authors

1. **Bowen, S.E.**, & Kallman, M. (1990). *Behavioral tolerance to multiple repetitive cocaine doses on milk drinking*. Paper presented at the meeting of the Federated Societies of Experimental Biology, Washington, DC. Abstract published in *The FASEB Journal (1990)*, Vol. 4, 2390, A679.
2. Durnam, M.R., **Bowen, S. E.**, Liao, R. M., Kallman, M. J. & Fowler, S.C. (1990). *Acute effects of intracaudally administered haloperidol*. Paper presented at the meeting of the Federated Societies of Experimental Biology, Washington, DC. Abstract published in *The FASEB Journal (1990)*, Vol. 4, 2044, A618.
3. Kallman, M., **Bowen, S. E.**, Ventress, L., Anderson, R., Durnam, M. & Fowler, S. (October 1990). *Behavioral tolerance to multiple chronic doses of midazolam on fixed ratio responding*. Paper presented at the meeting of the Society for Neuroscience, St. Louis, MO. Abstract published in *Society for Neuroscience Abstracts (1990)*, 16, 1103.
4. **Bowen, S. E.**, Kallman, M. J. & Durnam, M. R. (November 1991). *A comparison of schedule-induced effects of behavioral tolerance to triazolam and cocaine*. Paper presented at the meeting of the Society for Neuroscience, New Orleans, LA. Abstract published in *Society for Neuroscience Abstracts (1991)*, 17, 283.
5. **Bowen, S. E.**, Fowler, S. C., Stanford, J. A., & Kallman, M. J. (1992). *Diazepam and midazolam increase operant force emission in rats trained in a force-band task*. Paper presented at the meeting of the South Central Chapter of the Society of Toxicology, Memphis, TN. [Proceedings only].

6. Jackson, D. E., *Chandler, K., Bowen, S. E., & Hardage, J.* (1993). *Pre-watering and haloperidol produce common effects on rats' response rate and duration.* Paper presented at the meeting of the Midwestern Psychological Society, Chicago, IL. [Proceedings only].
7. **Bowen, S. E.,** & Jackson, D. E. (1993). *Haloperidol and pre-watering have similar effects on variable interval maintained behavior.* Paper presented at the meeting of the American Psychological Society, Chicago, IL. [Proceedings only].
8. Fowler, S. C., **Bowen, S. E.,** *Stanford, J.,* & Kallman, M. J. (August 1993). *Contingent tolerance to midazolam - induced elevation of operant response force.* Paper presented at the meeting of the American Psychological Association, Toronto, Canada. [Proceedings only].
9. Balster, R. L., Evans, E. B., Tokarz, M. E., Hamilton, J., & **Bowen, S. E.** (June 1994). *Abuse potential evaluation of volatile solvents: a first attempt.* Paper presented at the 56th Annual Scientific meeting of the College on Problems of Drug Dependence, Palm Beach, FL. Abstract published in *NIDA Research Monograph (1995), 153, 426.*
10. **Bowen, S. E.,** & Balster, R. L. (June 1994). *The effects of abused inhalants on locomotor activity in mice.* Paper presented at the 56th Annual Scientific meeting of the College on Problems of Drug Dependence, Palm Beach, FL. Abstract published in *NIDA Research Monograph (1995), 153, 425.*
11. **Bowen, S. E.,** Hamilton, J., & Balster, R. L. (June 1995). *Effects of abused inhalants on multiple schedule performance in mice.* Paper presented at the 57th Annual Scientific meeting of the College on Problems of Drug Dependence, Scottsdale, AZ. Abstract published in *NIDA Research Monograph (1996), 162, 282.*
12. **Bowen, S. E.,** Wiley, J. L., Tokarz, M. E., & Balster, R. L. (November 1995). *Effects of abused inhalants on an elevated plus-maze task in mice.* Paper presented at the 25th Annual Scientific meeting of the Society for Neuroscience, San Diego, CA. Abstract published in *Society for Neuroscience Abstracts (1995), 21, 726.*
13. **Bowen, S. E.,** & Balster, R. L. (November 1995). *Desflurane, enflurane, isoflurane, and ether produce ethanol-like discriminative stimulus effects in mice.* Paper presented at the 1995 meeting of the Society for Stimulus Properties of Drugs, San Diego, CA. [Proceedings only].
14. **Bowen, S. E.,** Tokarz, M., & Balster, R. L. (May 1996). *Ethanol-like discriminative stimulus properties of several alkylbenzene solvents.* Paper presented at the Annual Scientific meeting of the Virginia Academy of Science, Richmond, VA. Abstract published in *Virginia Journal of Science (1996), 47, 135.*
15. **Bowen, S. E.,** & Balster, R. L. (June 1996). *A method for titrating trichloroethane exposure using the schedule-controlled behavior of mice.* Paper presented at the Annual Scientific meeting of the Behavioral Toxicology Society, Research Triangle Park, NC. [Proceedings only].

16. Bernalov, A. Y., **Bowen, S. E.**, Tokarz, M. E., Beardsley, P. M., & Balster, R. L. (June 1996). *Pharmacological specificity of the ability of drugs to enhance the expression of morphine conditioned place preference in mice*. Paper presented at the 58th Annual Scientific meeting of the College on Problems of Drug Dependence, San Juan, PR. [Proceedings only].
17. Tokarz, M. E., **Bowen, S. E.**, & Balster, R. L. (June 1996). *Effects of isoparaffins on motor activity*. Paper presented at the 58th Annual Scientific meeting of the College on Problems of Drug Dependence, San Juan, PR. [Proceedings only].
18. **Bowen, S. E.**, Tokarz, M. E., & Balster, R. L. (June 1996). *Evaluation of the effects of volatile anesthetics in mice using a functional observation battery*. Paper presented at the 58th Annual Scientific meeting of the College on Problems of Drug Dependence, San Juan, PR. [Proceedings only].
19. Wiley, J. L., Golden, K. M., & **Bowen, S. E.** (November 1996). *Effects of modulation of nitric oxide on acoustic startle and prepulse inhibition in rats*. Paper presented at the 26th Annual Scientific meeting of the Society for Neuroscience, Washington, DC. Abstract published in *Society for Neuroscience Abstracts (1996)*, 22, 726.
20. Jones, H. E., **Bowen, S. E.**, & Balster, R. L. (November 1996). *Aspirin's ability to attenuate the developmental delays of prenatal exposure to 1,1,1-trichloroethane*. Paper presented at the 26th Annual Scientific meeting of the Society for Neuroscience, Washington, DC. Abstract published in *Society for Neuroscience Abstracts (1996)*, 22, 168.
21. **Bowen, S. E.**, Jones, H. E., & Balster, R. L. (November 1996). *Discriminative stimulus effects of alkylbenzene solvents in ethanol-trained mice*. Paper presented at the 26th Annual Scientific meeting of the Society for Neuroscience, Washington, DC. Abstract published in *Society for Neuroscience Abstracts (1996)*, 22, 1677.
22. **Bowen, S. E.**, Jones, H. E., & Balster, R. L. (March 1997). *Repeated exposure to 1,1,1-trichloroethane produces both tolerance and sensitization to effects on mouse behavior*. Paper presented at the 36th Annual Scientific meeting of the Society of Toxicology, Cincinnati, OH. Abstract published in *Fundamental and Applied Toxicologist Supplement - The Toxicologist (1997)*, 36, 62.
23. **Bowen, S. E.**, Wiley, J. L., Jones, H. E., & Balster, R. L. (June 1997). *Phencyclidine- and Diazepam-like discriminative stimulus effects of abused inhalants in mice*. Paper presented at the 59th Annual Scientific meeting of the College on Problems of Drug Dependence, Nashville, TN. [Proceedings only].
24. **Bowen, S. E.**, Wiley, J. L., & Balster, R. L. (May 1997). *Effects of volatile solvents on sensorimotor reactivity in rats*. Paper presented at the Annual Scientific meeting of the Virginia Academy of Science, Blacksburg, VA. Abstract published in *Virginia Journal of Science (1997)*, 48, 136.

25. **Bowen, S. E.**, & Balster, R. L. (October 1997). *Tolerance to the anxiolytic effects of diazepam and toluene as measured by an elevated plus-maze task in mice*. Paper presented at the 27th Annual Scientific meeting of the Society for Neuroscience, New Orleans, LA. Abstract published in *Society for Neuroscience Abstracts (1997)*, 23, 2395.
26. Tokarz, M. E., **Bowen, S. E.**, & Balster, R. L. (June 1998). *Time-course of the ethanol-like discriminative stimulus effects of abused inhalants in mice*. Paper presented at the 60th Annual Scientific meeting of the College on Problems of Drug Dependence, Scottsdale, AZ. Abstract published in *NIDA Research Monograph (1998)*, 179, 307.
27. **Bowen, S. E.**, Moretti, J. A., Steinmiller, C. L., & Young, A. M. (June 1998). *Behavioral pharmacology of the highly potent and mu-selective opioid receptor antagonist CTAP*. Paper presented at the 60th Annual Scientific meeting of the College on Problems of Drug Dependence, Scottsdale, AZ. Abstract published in *NIDA Research Monograph (1998)*, 179, 94.
28. DeLeon, S. N., **Bowen, S. E.**, & Young, A. M. (November 1998). *A comparison of the effects of opiate agonists and antagonists on the locomotor activity of rats*. Paper presented at the 1998 National Minority Research Symposium, New York, NY. [Proceedings only].
29. Young, A. M., DeLeon, S. N., & **Bowen, S. E.** (April 1999). *Tolerance and sensitization to locomotor stimulant effects of morphine and fentanyl*. Paper presented at the 1999 Experimental Biology Meeting, Washington, DC. Abstract published in *The FASEB Journal (1998)*, 13(5), A802.
30. **Bowen, S. E.**, Steinmiller, C. L., & Young, A. M. (June 1999). *Pharmacologic characterization of sensitization to opioid antagonists*. Paper presented at the 61<sup>st</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, Acapulco, Mexico. Abstract published in *NIDA Research Monograph (1999)*, 180, 110.
31. Clark, E., **Bowen, S. E.**, Evola, M., & Young, A. M. (November 1999). *Examination of morphine conditioned place preference*. Paper presented at the 1999 National Minority Research Symposium, Phoenix, AZ. [Proceedings only].
32. DeLeon, S. N., **Bowen, S. E.**, & Young, A. M. (November 1999). *Effects of naltrexone and ctap on locomotor activity of rats*. Paper presented at the 1999 National Minority Research Symposium, Phoenix, AZ. [Proceedings only].
33. Young, A. M., **Bowen, S. E.**, & Steinmiller, C. L. (June 2000). *Characterization of sensitization to opioid antagonists*. Paper presented at the 2000 ASBMB/ASPET meeting, Boston, MA. Abstract published in *The FASEB Journal (2000)*, 14(8), A1383.
34. **Bowen, S. E.**, Weber, A., Steinmiller, C. L., & Young, A. M. (June 2000). *Further characterization of the sensitization to opioid antagonists*. Paper presented at the 62<sup>nd</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, San Juan, PR. Abstract published in *Drug and Alcohol Dependence (2000)*, 60 (Sup. 1), S21.

35. Evola, M., **Bowen, S. E.**, Clark, E., & Young, A. M. (June 2000). *Examination of morphine conditional place preference with repeated drug pairing and testing in rats*. Paper presented at the 62<sup>nd</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, San Juan, PR. Abstract published in *Drug and Alcohol Dependence* (2000), 60 (Sup. 1), S60.
36. Steinmiller, C. L., **Bowen, S. E.**, & Young, A. M. (June 2000). *CTAP precipitated withdrawal in morphine dependent rats*. Paper presented at the 62<sup>nd</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, San Juan, PR. Abstract published in *Drug and Alcohol Dependence* (2000), 60 (Sup. 1), S213.
37. Clark, E. F., **Bowen, S. E.**, & Young, A. M. (November 2000). *Examination of MNLX and CTAP in a 2-key drug discrimination assay*. Paper presented at the 2000 National Minority Research Symposium, Washington, DC. [Proceedings only].
38. Thompson, S. D., Evola, M., Steinmiller, C. L., **Bowen, S. E.**, & Young, A. M. (November 2000). *Examination of antagonist precipitated withdrawal in morphine dependent rats*. Paper presented at the 2000 National Minority Research Symposium, Washington, DC. [Proceedings only].
39. **Bowen, S. E.**, Steinmiller, C. L., & Young, A. M. (June 2001). *Behavioral pharmacology of the mu opioid receptor antagonist naloxone methiodide*. Paper presented at the 63<sup>rd</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, Scottsdale, AZ. Abstract published in *Drug and Alcohol Dependence*, 63 (Sup. 1), 2001, p. S17.
40. Cruz, S. L., Salazar, L. A., **Bowen, S. E.**, & Young, A. M. (June 2001). *CTAP: A competitive or a noncompetitive opioid antagonist?* Paper presented at the 63<sup>rd</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, Scottsdale, AZ. Abstract published in *Drug and Alcohol Dependence* (2001), 63 (Sup. 1), S36.
41. Clark, E. F., **Bowen, S. E.**, & Young, A. M. (June 2001). *Central versus peripheral antagonism of morphine discrimination*. Paper presented at the 63<sup>rd</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, Scottsdale, AZ. Abstract published in *Drug and Alcohol Dependence* (2001), 63 (Sup. 1), S28.
42. Evola, M., Clark, E., **Bowen, S. E.**, & Young, A. M. (June 2001). *Extinction and reinstatement of morphine conditioned place preference following repeated drug pairing and testing in rats*. Paper presented at the 63<sup>rd</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, Scottsdale, AZ. Abstract published in *Drug and Alcohol Dependence* (2001), 63 (Sup. 1), S45.
43. Evola, M., **Bowen, S. E.**, & Young, A. M. (June 2002). *Repeated examination of morphine conditional place preference while testing across doses of morphine*. Paper presented at the 64<sup>th</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, Quebec City, Canada. Abstract published in *Drug and Alcohol Dependence* (2002), 66 (Sup. 1), S53.
44. **Bowen, S. E.**, Childrey, A., & Young, A. M. (June 2002). *Behavioral pharmacology of opioid antagonists with limited access across the blood-brain barrier*. Paper presented at the

- 64<sup>th</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, Quebec City, Canada. Abstract published in *Drug and Alcohol Dependence* (2002), 66 (Sup. 1), S19.
45. Batis, J.C., Hannigan, J.H., & **Bowen, S. E.** (June 2003). *Abuse patterns of gestational toluene inhalation and early postnatal development in rats*. Paper presented at the 65<sup>th</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, Bal Harbour, FL. [Proceedings only].
  46. Abner, R.T., Muhammad, E., & **Bowen, S. E.** (June 2003). *Effects of acute and repeated exposure to toluene on locomotor activity in male Swiss-Webster mice*. Paper presented at the 65<sup>th</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, Bal Harbour, FL. [Proceedings only].
  47. Evola, M., **Bowen, S. E.**, & Young, A.M. (June 2003). *The effect of locomotor activity on expression of morphine conditioned place preference*. Paper submitted for the 64<sup>th</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, Bal Harbour, FL. [Proceedings only].
  48. **Bowen, S. E.**, Mohammadi, M., Batis, J., & Hannigan, J.H. (June 2003). *Alterations in postnatal locomotor behavior following gestational toluene exposure*. Paper presented at the 22<sup>nd</sup> Annual Scientific meeting of the Behavioral Toxicology Society, Philadelphia, PA. [Proceedings only].
  49. Batis, J.C., Hannigan, J.H., & **Bowen, S.E.** (November 2003). *Differential impact of gestational toluene exposure on motor co-ordination in the rat*. Paper presented at the International Society for Developmental Psychobiology meeting, New Orleans, LA. Abstract published in *Developmental Psychobiology* (2003), 43, 247, #16.
  50. Mohammadi, M.H., Batis, J.C., Hannigan, J.H., & **Bowen, S.E.** (November 2003) *Long-term effects of prenatal exposure to toluene on spontaneous locomotor activity*. Paper presented at the 2003 International Society for Developmental Psychobiology meeting, New Orleans, LA. Abstract published in *Developmental Psychobiology* (2003), 43, 267, #95.
  51. Young, A.M., Muhammad, E.F., Shah, N., & **Bowen, S.E.** (December 2003). *Opioid antagonists differ in ability to precipitate behavioral signs of abstinence*. Paper presented at the Annual Scientific meeting of the American College of Neuropsychopharmacology, San Juan, PR. [Proceedings only].
  52. Batis, J.C., Mohammadi, M.H., Hannigan, J.H., & **Bowen, S.E.** (April 2004). *Early postnatal development following binge gestational toluene exposure in rats*. Paper presented at the 23<sup>rd</sup> Annual Scientific meeting of the Behavioral Toxicology Society, Raleigh/Durham, NC. Abstract published in *Neurotoxicology and Teratology* 26, 701. **Student Award Winner**.
  53. Mohammadi, M.H., Hannigan, J.H., & **Bowen, S.E.** (April 2004). *Biological effects of prenatal exposure to the abused inhalant toluene in rats*. Paper presented at the 23<sup>rd</sup> Annual Scientific meeting of the Behavioral Toxicology Society, Raleigh/Durham, NC. Abstract published in *Neurotoxicology and Teratology* 26, 695.

54. Calito, I., Batis, J., & Bowen, S.E. (2004). *Gait abnormalities due to prenatal toluene exposure*. Poster presented at Undergraduate Research Poster Day, Department of Psychology, Wayne State University, Detroit, MI. [Proceedings only].
55. Mohammadi, M.H., Hannigan, J.H., & **Bowen, S.E.** (June 2004). *Amphetamine-induced locomotor activity in rats prenatally exposed to toluene*. Paper presented at the 65<sup>th</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, San Juan, PR. **NIDA Women & Sex/Gender Junior Investigator Travel Awarded**. [Proceedings only].
56. Batis, J., Mohammadi, M.H., Ban, R.F., Hannigan, J.H., & **Bowen, S.E.** (June 2004). *Dose-dependent impairment of watermaze reversal learning following maternal toluene abuse*. Paper presented at the 65<sup>th</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, San Juan, PR. **Student Award Winner**. [Proceedings only].
57. **Bowen, S.E.**, & Muhammad, E. F. (June 2004). *Effects of acute and repeated exposure to toluene on scheduled-controlled behavior in male Swiss-Webster mice*. Paper presented at the 65<sup>th</sup> Annual Scientific meeting of the College on Problems of Drug Dependence, San Juan, PR. [Proceedings only].
58. Young, A.M., Muhammad, E.F., Childrey, A.S., Bowen, S.E., & Evola, M. (April 2005). *Opioid antagonists differ in ability to precipitate behavioral signs of abstinence*. Paper presented at the Annual Scientific meeting The Federation of American Societies for Experimental Biology. Abstract published in *FASEB JOURNAL (2005), 19 (5), A1071-A1071 Part 2 Suppl.*
59. Howells, J., Batis, J., Hannigan, J., & **Bowen, S.E.** (March 2005). *Effects of Neonatal Toluene Exposure on Gait in Rats*. Poster presented at Undergraduate Research Poster Day, Department of Psychology, Wayne State University, Detroit, MI. **1<sup>st</sup> place Student Award Winner**. [Proceedings only].
60. Walker, B., Muhammad, E., & Bowen, S.E. (March 2005). *Comparison of Amphetamine and Toluene in a 2-key Drug Discrimination Assay*. Poster presented at Undergraduate Research Poster Day, Department of Psychology, Wayne State University, Detroit, MI. **2<sup>nd</sup> place Student Award Winner**. [Proceedings only].
61. Kohl, A., Irtenkauf, S., & Bowen, S.E. (March 2005). *The effects of toluene exposure on juvenile, adolescent and young adult rats on weight gain*. Poster presented at Undergraduate Research Poster Day, Department of Psychology, Wayne State University, Detroit, MI. [Proceedings only].
62. Shepard, A., Childrey, A., & Bowen, S.E. (March 2005). *Age, gender, and dose-dependent effects of toluene abuse on the locomotor activity of rats*. Poster presented at Undergraduate Research Poster Day, Department of Psychology, Wayne State University, Detroit, MI. [Proceedings only].
63. **Bowen, S.E.**, & Muhammad, E. (June 2005). *Amphetamine-like discriminative stimulus effects of the abused inhalant toluene in mice*. Presented at the 24<sup>th</sup> Annual meeting of the

- Behavioral Toxicology Society and the 67<sup>th</sup> Annual meeting of the College on Problems of Drug Dependence, Orlando, FL. Abstract published in *Neurotoxicology and Teratology*, 27, 908.
64. **Bowen, S.E.**, & Muhammad, E. (June 2005). *Differential sensitivity to the locomotor effects of toluene in balb/c byj and dba/2j mice*. Presented at the 24<sup>th</sup> Annual meeting of the Behavioral Toxicology Society, St. Petersburg, FL. Abstract published in *Neurotoxicology and Teratology*, 27, 907.
65. Batis, J.C., Hannigan, J.H., & **Bowen, S. E.** (June 2005). *Critical period for the effects of toluene on developmental delays in rats*. Presented at the 67<sup>th</sup> Annual meeting of the College on Problems of Drug Dependence, Orlando, FL. [Proceedings only].
66. Batis, J.C., Hannigan, J.H., & **Bowen, S. E.** (June 2005). *Binge neonatal toluene exposure results in learning deficits in the morris water maze reversal task in rats*. Presented at the 24<sup>th</sup> Annual meeting of the Behavioral Toxicology Society, St. Petersburg, FL. Abstract published in *Neurotoxicology and Teratology*, 27, 907. **Student Award Winner**.
67. O'Leary-Moore, S.K., McMechan, A.P., Williams, D.R., Galloway, M.P., Hannigan, J.H., & **Bowen, S.E.** (November 2005). *Regional changes in neurochemistry after acute toluene exposure in juvenile rats measured by high-resolution 1H magnetic resonance spectroscopy*. Presented at the 38<sup>th</sup> Annual meeting of the International Society for Developmental Psychobiology, Washington, DC. [Proceedings only].
68. **Bowen, S.E.**, Howells, J., Batis, J., & Hannigan, J. (November 2005). *Effects of neonatal toluene exposure on hindlimb gait in rats*. Paper presented at the 35<sup>th</sup> Annual meeting of the Society for Neuroscience, Washington, DC. Abstract published in *Abstract Viewer/Itinerary Planner*, [www.sfn.org](http://www.sfn.org), #603.20.
69. **Bowen, S.E.** (2006). *Inhaled Solvent Abuse*. Presented at the College of Liberal Arts & Sciences (Wayne State University) Neuroscience Data blitz. Detroit, MI. [Proceedings only].
70. Cooper, P.B., Williams, D.R., Batis, J., Hannigan, J.H., & **Bowen, S.E.** (June 2006). *Prenatal Exposure to Toluene Alters Attention and Impulsive Behavior in Rats in a "Waiting-for-Reward" Task*. Presented at the 68<sup>th</sup> Annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ. **Student Award Winner at Wayne State University's Department of Psychology Undergraduate Student Poster Day and at the Society for Neuroscience – Michigan Chapter Meeting**. [Proceedings only].
71. O'Leary-Moore, S.K., McMechan, A.P., Batis, J.C., Galloway, M.P., Hannigan, J.H., & **Bowen, S.E.** (June 2006). *Age- and region-dependent alterations in brain glutamate, gaba and glutamine levels after acute toluene exposure in juvenile and adolescent rats measured by high-resolution 1H magnetic resonance spectroscopy at 11.7 Tesla*. Presented at the 68<sup>th</sup> Annual meeting of the College of Problems of Drug Dependence, Scottsdale, AZ. [Proceedings only]



72. Batis, J.C., Irtenkauf, S., Hannigan, J., & **Bowen, S.E.** (June 2006). *Maternal Blood and Organ Toluene Levels after Acute and Repeated Binge Exposures*. Presented at the 68<sup>th</sup> Annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ. **NIDA Women & Sex/Gender Junior Investigator Travel Awarded** [Proceedings only].
73. **Bowen, S.E.**, Batis, J.C., & Hannigan, J. (June 2006). *Changes in locomotor activity and toluene blood concentrations following repeated exposures in adolescent rats*. Presented at the 68<sup>th</sup> Annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ. [Proceedings only].
74. Cooper, P.B., Williams, D.R., Batis, J., Hannigan, J.H., & **Bowen, S.E.** (June and November 2006). *Prenatal exposure to toluene alters attention and impulsive behavior in rats in a "waiting-for-reward" task*. Presented at the 68<sup>th</sup> Annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ, and the 3<sup>rd</sup> Annual Wayne State University Undergraduate Research Conference, Detroit, MI. [Proceedings only]
75. Batis, J.C., Irtenkauf, S., Hannigan, J., & **Bowen, S.E.** (2006). *Maternal Blood and Organ Toluene Levels after Acute and Repeated Binge Exposures*. Paper presented at the 25<sup>th</sup> Annual Meeting of the Behavioral Toxicology Society, Little Rock, AR. Abstract published in *Neurotoxicology and Teratology*, 28(6), 707.
76. Batis, J.C., Hannigan, J., & **Bowen, S.E.** (2006). **BTS Student Travel Award Winner**. Relationship between locomotor activity and toluene blood concentrations following repeated binge toluene exposures in adolescent rats. Paper presented at the 25<sup>th</sup> Annual Meeting of the Behavioral Toxicology Society, Little Rock, AR. Abstract published in *Neurotoxicology and Teratology*, 28(6), 711.
77. O'Leary-Moore, S.K., McMechan, A.P., Batis, J.C., Galloway, M.P., Hannigan, J.H., & **Bowen, S.E.** (2006). *Neurochemical effects of acute toluene exposure in juvenile and adolescent rats measured by high-resolution MRS*. Paper presented at the 25<sup>th</sup> Annual Meeting of the Behavioral Toxicology Society, Little Rock, AR. Abstract published in *Neurotoxicology and Teratology*, 28(6), 708-709.
78. O'Leary-Moore, S.K., McMechan, A.P., Galloway, M.P., Hannigan, J.H. & **Bowen, S.E.** (November 2006). *Acute toluene neurotoxicity in adolescent and adult rats measured by high-resolution magnetic resonance spectroscopy at 12 Tesla*. Paper presented at the 35<sup>th</sup> Annual meeting of the Society for Neuroscience, Atlanta, GA. Abstract published in *Abstract Viewer/Itinerary Planner*, [www.sfn.org](http://www.sfn.org), #486.16.
79. **Bowen, S.E.**, Irtenkauf, S., Batis, J.C. & Hannigan, J.H. (November 2006). *Maternal blood, brain and organ toluene levels after acute and repeated binge exposures*. Paper presented at the 35<sup>th</sup> Annual meeting of the Society for Neuroscience, Atlanta, GA. Abstract published in *Abstract Viewer/Itinerary Planner*, [www.sfn.org](http://www.sfn.org), #832.26.
80. Yamada, N., Kaur, D., Goja, A., Bataineh, M., Saab, R.H., Irtenkauf, S.M., **Bowen, S.E.**, Gupta, S.V. & P. Khosla (March 2007). *Multi-functional assessment of diet-induced*

- hypercholesterolemia on brain cholesterol metabolism in aged brown Norway rats – a model for alzheimer’s disease?* Presented at the 8th International Conference on Alzheimer’s and Parkinson’s Diseases, Salzburg, Austria. Abstract published in: *The FASEB journal*, 21, 231.8. [http://www.fasebj.org/cgi/content/meeting\\_abstract/21/5/A109-d](http://www.fasebj.org/cgi/content/meeting_abstract/21/5/A109-d).
81. **Bowen, S.E.** (2007). Developmental Toxicity of Prenatal Exposure to Toluene. Presented at the College of Liberal Arts & Sciences (Wayne State University) Neuroscience Data blitz. Detroit, MI. [Proceedings only].
  82. Stefanski, A., Irtenkauf, S., Hannigan, J., & **Bowen, S.E.** (2007). The effect of prenatal toluene exposure on skeletal abnormality. Presented at Society for Neuroscience – Michigan Chapter Meeting, University of Michigan, Ann Arbor, MI. [Proceedings only].
  83. Cooper, P., Hannigan, J.H., & **Bowen, S.E.** (2007). Effects of prenatal toluene exposure on measures of motivation and attention. Presented at Society for Neuroscience – Michigan Chapter Meeting, University of Michigan, Ann Arbor, MI [Proceedings only].
  84. Kimar, S., & **Bowen, S.E.** (2007). *Mouse strain differences in locomotor effects induced by toluene*. Presented at Society for Neuroscience – Michigan Chapter Meeting, University of Michigan, Ann Arbor, MI [Proceedings only].
  85. Cooper, P., Hannigan, J.H., & **Bowen, S.E.** (April 2007). *The effects of prenatal exposure to toluene on measures of impulsivity*. Paper presented at the 21st National Conference on Undergraduate Research (NCUR 21), Dominican University of California, San Francisco, CA. Abstract published online: [www.dominican.edu/ncur21](http://www.dominican.edu/ncur21).
  86. Cooper, P., Hannigan, J.H., & **Bowen, S.E.** (June 2007). *Effects of prenatal toluene exposure on performance under a progressive-ratio reinforcement schedule*. Presented at Society for Neuroscience – Michigan Chapter Meeting, University of Michigan, Ann Arbor, MI and the 69<sup>th</sup> Annual meeting of the College on Problems of Drug Dependence, Quebec City, Quebec, Canada.
  87. Batis, J.C., **Bowen, S.E.**, & Hannigan, J. (June 2007). *Effect of task difficulty on acquisition and reversal of a morris water maze task in rats prenatally exposed to toluene*. Presented at the 69<sup>th</sup> Annual meeting of the College on Problems of Drug Dependence, Quebec City, Quebec, Canada.
  88. **Bowen, S.E.**, & McDonald, P. (June 2007). Repeated toluene exposure hampers behavioral performance as measured by a waiting for reward task. Presented at Society for Neuroscience – Michigan Chapter Meeting, University of Michigan, Ann Arbor, MI and the 69<sup>th</sup> Annual meeting of the College on Problems of Drug Dependence, Quebec City, Quebec, Canada.
  89. **Bowen, S.E.**, & McDonald, P. (June 2007). *Neurobehavioral effects of repeated binge toluene exposure as measured by a waiting-for-reward operant task*. Presented at the 26<sup>th</sup> Annual Meeting of the Behavioral Toxicology Society, Pittsburgh, PA. Abstract published in *Neurotoxicology and Teratology*, 29(5), 588.

90. Cooper, P., Hannigan, J.H., & **Bowen, S.E.** (November 2007). *Prenatal toluene exposure affects motivation as measured under a progressive-ratio reinforcement schedule*. Paper presented at the 36<sup>th</sup> Annual meeting of the Society for Neuroscience, Atlanta, GA. Abstract published in *Abstract Viewer/Itinerary Planner*, [www.sfn.org/#530.14](http://www.sfn.org/#530.14).
91. Stefanski, A., Irtenkauf, S., Hannigan, J., & **Bowen, S.E.** (April 2008). *The effect of prenatal toluene exposure on skeletal abnormality*. Paper presented at Wayne State University's Department of Psychology Undergraduate Student Poster Day (Student Award Winner). Also Presented at the 22<sup>nd</sup> National Conference on Undergraduate Research (NCUR 22), Salisbury University, MD. Abstract published online [www.salisbury.edu/ncur22](http://www.salisbury.edu/ncur22).
92. Irtenkauf, S., & **Bowen, S.E.** (June 2008). *Development of a dynamic exposure system allowing for self-administration of abused inhalants in mice*. Paper presented at the 70<sup>th</sup> Annual meeting of the College on Problems of Drug Dependence, San Juan, PR. [Proceedings only].
93. **Bowen, S.E.**, & Batis, J. (June 2008). *Increased sensitivity in adolescent versus adult rats to the locomotor activating effects of toluene*. Paper presented at the 70<sup>th</sup> Annual meeting of the College on Problems of Drug Dependence, San Juan, PR. [Proceedings only].
94. Stefanski, A., Irtenkauf, S., Hannigan, J., & **Bowen, S.E.** (June 2008). *Alterations in skeletal development following gestational toluene exposure*. Presented at the 70<sup>th</sup> Annual meeting of the College on Problems of Drug Dependence, San Juan, PR. [Proceedings only].
95. **Bowen, S.E.**, & Kimmar, S. (November 2008). *Effects of genetic and procedural variation on measurement of toluene sensitivity in mouse inbred strains*. Paper presented at the 37<sup>th</sup> Annual meeting of the Society for Neuroscience, Washington, DC. Abstract published in *Abstract Viewer/Itinerary Planner*, [www.sfn.org/#849.7](http://www.sfn.org/#849.7).
96. Willmore-Fordham, C.B., Lim, S.L., Burkat, A.J., Irtenkauf, S., Krall, D.M. & **Bowen, S.E.** (November, 2008). *Chronic adolescent exposure to amphetamine corrupts timing behavior in amphetamine rechallenged adult rats*. Paper presented at the 37<sup>th</sup> Annual meeting of the Society for Neuroscience, Washington, DC. Abstract published in *Abstract Viewer/Itinerary Planner*, [www.sfn.org/#877.12](http://www.sfn.org/#877.12). Also Presented at the Department of Psychology Undergraduate Student Poster Day, Wayne State University, Detroit, MI (April, 2009).  
**Student Award Winner**
97. Sills, J., Parott, G., Donnan, S.J. & **Bowen, S.E.** (April 2009). *Discriminative Stimulus Effects of the Abused Inhalant Toluene in Rats*. Paper presented at the 23<sup>rd</sup> Annual meeting of the National Conference on Undergraduate Research, University of Wisconsin-LaCrosse, LaCrosse, WI. Also Presented at the Department of Psychology Undergraduate Student Poster Day, Wayne State University, Detroit, MI (April, 2009).
98. Schifirnet, E., Amine, A., Lati, C. S., **Bowen, S. E.**, & Borszcz, G. S. (2009, Oct. 19th). Comparison between carbachol-induced affective analgesia and conditioned place preference

- learning in the posterior and anterior ventral tegmental area. Society for Neuroscience 39th Annual Meeting 2009, Chicago, IL, USA. Society for Neuroscience Abstracts, 361.7/BB33.
99. Perrine, S.A., O'Leary-Moore, S.K., Galloway, M.P., Hannigan, J.H. & **Bowen, S.E.** (June, 2009). *Chronic toluene exposure differentially regulates amino acid neurotransmitters in the adolescent rat brain following acute or prolonged drug-abstinence*. Paper presented at the 71<sup>st</sup> Annual meeting of the College on Problems of Drug Dependence, Reno, NV. [Proceedings only].
100. Conti, A., Susick, L., Lowing, J., **Bowen, S.E.** (2011). *Adenylyl cyclases types 1 and 8 alter behavioral responses to toluene*. Paper presented at the Annual meeting of the College on Problems of Drug Dependence, Hollywood, Fl. [Proceedings only]
101. **Bowen, S.E.**, Lowing, J.L., Susick, L.L., and Conti, A.C. (2011). *Differential Effects of Adenylyl Cyclase 1 and 8 Activity on Toluene and Ethanol Action*. Paper presented at the Annual meeting of the University of Michigan Substance Abuse Research Center, Ann Arbor, MI. [Proceedings only].
102. Schifirnet, E., Amine, A., Lati, C. S., Lucas, J. M., **Bowen, S. E.**, & Borszcz, G. S. (2011, July 18th). Separating analgesia from addictive liability within the ventral tegmental area. 8<sup>th</sup> International Brain Research Organization World Congress of Neuroscience, Florence, Italy. IBRO Program D247.
103. **Bowen, S.E.**, Mathews, T.A., and Apawu, A. (2011). *Effects of repeated toluene exposure on dopamine uptake in mouse nucleus accumbens and caudate putamen*. Paper presented at the 2011 Annual meeting of the Society for Neuroscience, Washington, DC. Abstract published in *Abstract Viewer/Itinerary Planner*, [www.sfn.org](http://www.sfn.org), # 266.12/GG4.
104. Apawu, A., **Bowen, S.E.**, and Mathews, T.A. (2012). *Probing the Effect of Repeated Toluene Exposure on the Striatal Dopamine Dynamics Using Fast Scan Cyclic Voltammetry*. Paper presented at the Annual meeting of the Pittcon Conference and Expo, Orlando, Fl.
105. Lowing, J.L., Susick, L.L., **Bowen, S.E.**, and Conti, A.C.. (June 2012). *Genetic Deletion of Adenylyl Cyclases 1 and 8 Attenuates the Locomotor Stimulating Effects of Ethanol*. Paper presented at the Annual meeting of the Research Society on Alcoholism, San Fransico, CA. Abstract published in *Alcoholism-Clinical and Experimental Resesearch*, 36, 257a.
106. **Bowen, S.E.** and Reid, A. (2012). *Acquisition of ethanol-induced conditioned place preference in mice pre-treated with toluene during adolescence*. Paper presented at the 2012 Annual meeting of the Society for Neuroscience, New Orleans, LA. Abstract published in *Abstract Viewer/Itinerary Planner*, [www.sfn.org](http://www.sfn.org), # 258.09/T11.
107. Lowing, J.L., Susick, L.L., **Bowen, S.E.**, and Conti, A.C.. (June 2012). *Adenylyl cyclases 1 and 8 modulate ethanol-induced locomotor activation*. Paper presented at the 2012 Annual meeting of the Society for Neuroscience, New Orleans, LA. Abstract published in *Abstract Viewer/Itinerary Planner*, [www.sfn.org](http://www.sfn.org), # 560.07/T12.

108. Callan, S.P., McCarthy, M.K., Cleary, J.P., Fontanesi, J., Michael, D.B., **Bowen, S.E.**, Marples, B. (May 2013). *Effect of Radiation Therapy on Acquisition of a Morris Water-Maze Task in "Alzheimer" Mice*. Paper presented at the 2013 Annual meeting of the Michigan Chapter, Society for Neuroscience, Detroit, MI.
109. Apawu, A.K., **Bowen, S.E.**, and Mathews, T.A. (May 2013). *Acute and Repeated Toluene Exposure Dysregulates Striatal Dopamine Dynamics*. Paper presented at the 2013 Annual meeting of the Michigan Chapter, Society for Neuroscience, Detroit, MI.
110. Lombardo, J.N., Callan, S.P., Hannigan, J.H., and **Bowen, S.E.** (May 2014). *Neonatal Exposure to Toluene Disrupts Gait Symmetry and Step Angle: Evidence for Cerebellar Disruption in a Rat Model of Fetal Solvent Syndrome*. Paper presented at the 2013 Annual meeting of the Michigan Chapter, Society for Neuroscience, Detroit, MI. Abstract published in Abstract Viewer, [http://mi-sfn.org/sites/default/files/misfn\\_abs\\_2014\\_2.pdf](http://mi-sfn.org/sites/default/files/misfn_abs_2014_2.pdf). **1st place award at 2014 CLAS/WSU Showcase Poster Contest.**
111. Callan, S.P., Apawu, A.A., Matthews, T.A., and **Bowen, S.E.** (May 2014). *The Effect of Acutely Inhaled Toluene on Locomotor Activity and Extracellular Dopamine is Moderated by GABA in the Mouse Caudate Putamen*. Paper presented at the 2013 Annual meeting of the Michigan Chapter, Society for Neuroscience, Detroit, MI. Abstract published in Abstract Viewer, [http://mi-sfn.org/sites/default/files/misfn\\_abs\\_2014\\_2.pdf](http://mi-sfn.org/sites/default/files/misfn_abs_2014_2.pdf).
112. Callan, S.P., Apawu, A.A., Matthews, T.A., and **Bowen, S.E.** (2014). *The effect of acutely inhaled toluene on locomotor activity and extracellular dopamine is moderated by gaba in the mouse caudate putamen*. Paper presented at the 2014 Annual meeting of the Society for Neuroscience, Washington, D.C.
113. **Bowen, S.E.**, Callan, S.P., and Hannigan, J.H. (2014). *Dose-dependent impairment of spatial memory performance in the morris water maze task following abuse patterns of prenatal toluene exposure*. Paper presented at the 2014 Annual meeting of the Society for Neuroscience, Washington, D.C.
114. Callan, S.P., Lombardo, J.N., Hannigan, J.H., **Bowen, S.E.** (2014). *Gestional exposure to abuse levels of inhaled toluene disrupts acquisition of water t-maze learning but not in a subsequent reversal task*. Paper presented at the 2014 Annual meeting of the International Society for Developmental Psychobiology, Washington, D.C.
115. Fontanesi, J., Michael, D.B., Martinez, A.A., Wilson, G., **Bowen, S.E.**, Marples, B. (2015). *Low dose whole brain irradiation (LDWBI) as a potential treatment for alzheimer's disease (AD)*. Paper presented at the 12<sup>th</sup> International Conference on Alzheimer's & Parkinson's Diseases. Published *Neurodegener Dis* 2015;15 (suppl 1): 352-1969 - Page 834. <http://www.karger.com/Article/Pdf/381736>
116. Lombardo, J.N., **Bowen, S.E.**, Tomaszycski, M.L. (2015). *Repeated toluene exposure does not increase activation of dopaminergic cells in the nigrostriatal pathway of adolescent mice*. Paper presented at the 2015 Annual meeting of the Michigan Chapter, Society for

- Neuroscience, Mount Pleasant, MI. Abstract published in Abstract Viewer, [http://mi-sfn.org/sites/default/files/COMPLETE\\_Abstract\\_MISFN\\_2015.pdf](http://mi-sfn.org/sites/default/files/COMPLETE_Abstract_MISFN_2015.pdf).
117. Callan, S.P., Lombardo, J.N., Hannigan J.H., Bowen, S.E. (2015). *Gestational exposure to abuse levels of inhaled toluene disrupts acquisition of water T-maze learning but not in a subsequent reversal task.* Paper presented at the 2015 Annual meeting of the Michigan Chapter of the Society for Neuroscience, Mount Pleasant, MI. Abstract published in Abstract Viewer, [http://mi-sfn.org/sites/default/files/COMPLETE\\_Abstract\\_MISFN\\_2015.pdf](http://mi-sfn.org/sites/default/files/COMPLETE_Abstract_MISFN_2015.pdf).
118. Callan, S.P., Apawu, A.K., Mathews, T.A. and Bowen, S.E. (2015). *Repeated exposure to the abused inhalant toluene alters stimulated dopamine release in the accumbens.* Paper presented at the 2015 Annual meeting of the Michigan Chapter, Society for Neuroscience, Mount Pleasant, MI. Abstract published in Abstract Viewer, [http://mi-sfn.org/sites/default/files/COMPLETE\\_Abstract\\_MISFN\\_2015.pdf](http://mi-sfn.org/sites/default/files/COMPLETE_Abstract_MISFN_2015.pdf).
119. Fontanesi, J., Michael, D.B., Marples, B., Wilson, G.D., Martinez, A.A., Bowen, S.E. (2015). *Low dose whole brain irradiation as a potential treatment of Alzheimer's disease.* Paper presented at the 2015 meeting of Clinical Trials in Alzheimer's Disease, Barcelona, Spain.
120. Callan, S.P., Apawu, A.K., Mathews, T.A., Bowen, S.E. (2016). *Repeated Exposure to the Abused Inhalant Toluene Alters Stimulated Dopamine Release in the Accumbens.* Paper presented at the 2016 meeting of the Translational Neuroscience Research Day. Detroit, MI.
121. Callan, S.P., Davidson, C.J. & Bowen, S.E. (2016). *Decreased seizure threshold in mice following twenty-four hour exposure to toluene vapor.* Paper presented at the 2016 meeting of the Michigan Chapter of the Society of Neuroscience, Lansing, MI and at the National Meeting of the Society of Neuroscience, San Diego, CA. <https://www.sfn.org/>
122. Wallin CM... Brummelte S, **Bowen, S.E.** (2018). *Gestational Opioid Exposure & Neonatal Abstinence Syndrome. Developmental Effects & Neurodevelopmental Outcomes.* International Society for Developmental Psychology (ISDP). San Diego, California. (Travel award).
123. Davidson, C.J., Naddaf, M.M., Holcomb, D.L., Bowen, S.E. (2018). *Binge-like toluene exposure in periadolescence alters the behavioral responsiveness to subsequent drug challenges in Swiss-Webster mice.* Presented at Michigan Society for Neuroscience Annual Meeting at Wayne State University, Detroit, MI.
124. Wallin CM... Brummelte S, **Bowen S.E.** (2019). *Buprenorphine exposure during gestation results in dose-dependent consequences for the dam and her litter in a translational model of opioid-maintenance therapy.* International Society for Developmental Psychology (ISDP). Chicago, IL. (Travel award).
125. Wallin CM... Brummelte S, **Bowen S.E.** (2019). *Preconceptional, gestation, and postpartum buprenorphine exposure in rats: Litter outcomes, development, and adolescent behavior.* College on Problems of Drug Dependence. San Antonio, TX. (Travel award).

126. *Wallin CM...* Brummelte S, **Bowen S.E.** (2019) Buprenorphine exposure during gestation results in dose-dependent consequences for the dam and her litter in a translational model of opioid-maintenance therapy. Michigan Chapter for the Society for Neuroscience, Kalamazoo, MI (Founders award).
127. *Wallin CM...* Brummelte S, **Bowen S.E.** (2019) Buprenorphine exposure during gestation results in dose-dependent consequences for the dam and her litter in a translational model of opioid-maintenance therapy. The Society for neuroscience (SfN). Chicago, IL.
128. *Davidson, C.J., Svenson, D.W., Heslip, K.W., Naddaf, M.M., Bowen, S.E.* (2019) Repeated Exposure to Environmental-like concentrations of Benzene Toluene, Ethylbenzene, and Xylene (BTEX) in Adolescent Swiss-Webster Mice Results in Alterations to Locomotor Activity. Presented at Society for Neuroscience National Conference, Chicago, IL. And at International Society of Developmental Psychobiology National Conference Meeting, Chicago, IL.
129. *Davidson, C.J., Svenson, D.W., Heslip, K.W., Naddaf, M.M., Hannigan, J.H., Bowen, S.E.* (2019). Acute and Long-term effects of environmental-like concentrations of combined exposure to Benzene, Toluene Ethylbenzene, and Xylene (BTEX). Presented at Global Health, Justice, and the Environment Conference Detroit, MI.
130. *Davidson, C.J., Bowen, S.E.* (2019). Periadolescence Toluene Exposure Alters Behavioral Responsiveness to Later Ethanol or Cocaine Challenges in Swiss-Webster Mice. Presented at College on Problems of Drug Dependence (CPDD) annual meeting San Antonio, TX.
131. *Davidson, C.J., Naddaf, M.M., Bowen, S.E.* (2019). Differences in locomotor activation during exposure to binge-like toluene during the periadolescence period in Swiss-Webster mice. Presented at Michigan Society for Neuroscience Annual Meeting at Western Michigan University, Kalamazoo, MI and Presented at Translational Neuroscience Presentation day at Wayne State University, Detroit, MI.
132. Brummelte, S., *Wallin, CW, Roberge, CL, LM Richardson, LM, Bowen, S.E.* (2020). A Translational Model of Gestational Buprenorphine Exposure: Effects on the Dam and the Offspring. Presented at the Society for Birth Defects Research and Prevention Virtual 60th Annual Meeting. Abstract published in Birth Defects Research, 112 (11), 811.  
<https://onlinelibrary.wiley.com/toc/24721727/2020/112/11>

#### Other Select Professional Activities:

Date	Activity
1998	Co-chair -- College on Problems of Drug Dependence. Oral session entitled "Analgesia: Basic and Clinical Studies."
1999	Co-chair -- College on Problems of Drug Dependence. Oral session entitled "The Multifaces of Naltrexone."
2000-2001	Constitution and By-Laws Committee ( <b>Behavioral Toxicology Society</b> )
2003-2006	Treasurer ( <b>Behavioral Toxicology Society</b> )

2003-2011	Media Relations Committee ( <b>College on the Problems of Drug Dependence</b> ).
2006	Chair, 3 <sup>rd</sup> Annual Wayne State University Undergraduate Research Conference. Oral session entitled "Community Health".
2006	Co-chair -- College on Problems of Drug Dependence. Oral session entitled "Sedative/Hypnotics: knock yourself out!"
2006-2007	President Elect ( <b>Behavioral Toxicology Society</b> )
2006-2008	Councilor ( <b>Michigan Chapter, Society for Neuroscience</b> )
2007-2008	President ( <b>Behavioral Toxicology Society</b> )
2007-present	Organizer and Judge, <b>Psi Chi &amp; The Department of Psychology: Rodney Clark Memorial Poster Day for Undergraduate Research</b> , Wayne State University, Detroit MI
2008	Chair, Organizing Committee for 2008 Annual meeting of the Michigan Chapter, Society for Neuroscience (Wayne State University)
2009-present	Public Affairs Committee ( <b>Neurobehavioral Teratology Society</b> )
2006-2009	Constitution and By-Laws Committee ( <b>Neurobehavioral Teratology Society</b> )
2011, 2017	Microteaching Leader for Graduate School and the Office of Teaching (Wayne State University)
2012	Graduate Research Awards Judge (Wayne State University)
2012-2013	President-elect ( <b>Michigan Chapter, Society for Neuroscience</b> )
2013-2015	President ( <b>Michigan Chapter, Society for Neuroscience</b> )
2019-present	Merrill Palmer Skillman Institute Internal Advisory Board

**Community Service:**

<b>Date</b>	<b>Activity</b>
1988	<b>Volunteer</b> , De Lepee Deaf Center, Gulfport, MS
1991	<b>Science Fair judge</b> , Mississippi Regional Science Fair
1995-1996	<b>Project Screening Judge</b> , Metro Richmond Science Fair
1999 – Present	<b>Senior Division Judge</b> , State of Michigan Science and Engineering Fair, Detroit, MI
1999 – Present	<b>Senior Division Judge, Grand Awards Judge</b> , Science & Engineering Fair of Metro. Detroit, Detroit, MI
2000	<b>Grand Awards Judge</b> , International Science and Engineering Fair, Detroit, MI
2000-2005	<b>Manager/coach</b> , Little League Baseball, Redford, MI
2001-2004	<b>Outings and Advancements Coordinator</b> , Cub Scout Pack 387, Redford, MI
2002 – 2004	<b>Lecturer/Presenter</b> for Brain Awareness Week, Vandenberg Elementary School, Redford, MI
2018 (March)	<b>Volunteer</b> , "Brain Day" at the Detroit Science Center, Detroit, MI