

AWARD NUMBER: W81XWH-18-1-0816

TITLE: Connectome Biomarkers for Predicting Alzheimer's Risk in Traumatic Brain Injury

PRINCIPAL INVESTIGATOR: Jane Joseph, PhD and Olga Brawman-Mintzer, MD

CONTRACTING ORGANIZATION: Medical University of South Carolina
Charleston, SC 29425

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14. ABSTRACT Many Veterans have suffered a traumatic brain injury (TBI), and recent studies have shown that head injury is a risk factor for the development of dementia or Alzheimer's Disease (AD). Although there is strong emerging evidence that TBI and AD show similarities in neuropathology, measuring cellular and molecular changes following TBI is difficult in clinical populations. However, network analysis of resting state fMRI data is a non-invasive approach that can be used to characterize alterations in network communication in the brain in AD. The overall goal of this project is to characterize brain network alterations in AD as potential biomarkers, then determine whether these biomarkers are already present in the TBI brain, even prior to the onset of cognitive impairment or AD.					
15. SUBJECT TERMS Traumatic Brain Injury, Alzheimer's Disease, resting state fMRI, diffusional kurtosis imaging, network analysis, graph theory, positron emission tomography, amyloid beta, cognitive testing					
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TABLE OF CONTENTS

	<u>Page</u>
1. Introduction	1
2. Keywords	1
3. Accomplishments	1
4. Impact	3
5. Changes/Problems	4
6. Products	6
7. Participants & Other Collaborating Organizations	7
8. Special Reporting Requirements	8
9. Appendices	8

1. INTRODUCTION:

Traumatic brain injury (TBI) is a risk factor for Alzheimer's Disease (AD). The goal of this study is to examine whether neuroimaging and brain network analysis can be used to identify features of AD-like network disruption in Veterans with TBI who do not yet show clinical signs of AD. The long-term goal is to establish neuroimaging markers of risk for AD. Existing resting state and diffusional kurtosis MRI data from AD patients (n=30) and matched controls (n=30) will be used to build models of AD network disruption. AD models will then be applied to military Veterans and civilians with TBI (TBI+, n=30) and without TBI (TBI-, n=30). PET scanning will also be conducted in the TBI+ group to determine beta-amyloid status. Participants will also return for a 6-month follow-up visit for cognitive testing.

2. KEYWORDS:

Traumatic Brain Injury, Alzheimer's Disease, resting state fMRI, diffusional kurtosis imaging, network analysis, graph theory, positron emission tomography, amyloid beta, cognitive testing

3. ACCOMPLISHMENTS:

What were the major goals of the project?

Milestone 1 (by month 4): Establish experimental procedures

Milestone 2 (by month 30): Select MRI and DTI images to use from ADNI and ADNI/DOD repository.

Milestone 3 (by month 36): Conduct machine learning analyses to build models of AD network pathology for Aim 1. Submit papers for publication.

Milestone 4 (by month 36): Screen, enroll and test TBI+ and TBI- subjects.

Milestone 5 (by month 36): Preprocess rsfMRI and DTI data in 30 TBI+ and 30 TBI- subjects and conduct machine learning analyses proposed for Aim 2. Submit papers for publication.

Milestone 6 (by month 36): Analyze PET images and correlate SUVR with functional and structural network properties. Submit manuscripts for publication.

What was accomplished under these goals?

1) Major activities:

- a. Establish procedures (Milestone 1)
- b. Select data for AD+ and HC subjects from existing repositories / studies (Milestone 2)
- c. Collect data in TBI+ and TBI- subjects (Milestone 4).

2) Specific Objectives:

- a. Establish Procedures (Milestone 1):
 - i. Obtain MUSC IRB approval
 - ii. Obtain VA IRB approval
 - iii. Obtain USAMRMC and HRPO approvals
 - iv. Set up and test fMRI and DTI scanning protocols, train research coordinator for MRI data collection
 - v. Train research coordinator for cognitive testing
 - vi. Establish data sharing procedures with FITBIR
- b. Select data for AD and HC subjects from existing repositories / studies (Milestone 2)
 - i. Query ADNI repository for AD and HC rsfMRI and DTI data
 - ii. Select AD and HC DTI data from prior funded grant (Helpert R01AG027852).
 - iii. Select rsfMRI and DTI/DKI data from ongoing separately funded grant (Joseph R01AG055132).
 - iv. Query HCP repositories for AD and HC rsfMRI and DTI data when data are released (Two funded HCP grants: 1UF1AG051216, 3UF1AG051197).

- v. rsfMRI data processing in 30 AD subjects and 30 HC subjects: Download and convert images, perform quality checks on images, preprocess data, GTB analysis
 - vi. DTI data processing in 30 AD subjects and 30 HC subjects: Download and convert images, perform quality checks on images, preprocess data, GTB analysis.
 - c. Collect data in TBI+ and TBI- subjects (Milestone 4).
 - i. Screen and test TBI+ and TBI- subjects (Target = 24 total).
 - ii. MRI scanning in TBI+ and TBI- subjects (Target = 24 total).
 - iii. PET scanning in TBI+ subjects (Target = 24 total).
- 3) Significant Results:
- a. Establish Procedures (Milestone 1):
 - i. MUSC IRB approval obtained
 - ii. VA IRB approval obtained
 - iii. USAMRMC and HRPO approvals obtained
 - iv. Scanning protocols have been established and research coordinator has been trained for MRI data collection
 - v. Research coordinator has been trained for cognitive testing
 - vi. FITBIR data upload completed by September 30, 2019 (4 datasets)
 - b. Select data for AD and HC subjects from existing repositories / studies (Milestone 2)
 - i. We have identified 17 fMRI (17 AD and 17 HC subjects) and 7 DKI (7 AD and 7 HC subjects) case-control matched datasets from ADNI, our prior pilot study and ongoing study using inclusion criteria of sex=male, age range=55-85, magnetic field strength=3 Tesla. Our goal is to match the AD and HC groups on study site / magnet manufacturer as closely as possible; that is, if we cannot get enough data from the same study site and manufacturer, we will make sure the two groups have the same representation from different study sites and scanners. Of the 17 matched rsfMRI datasets identified thus far, 13 are matched on scanner. As more data become available from various sources identified in Section 2 above, we will attempt to match all rsfMRI cases by scanner. All of the identified DKI datasets are from Siemens scanners. We will also ensure that the rsfMRI scans are matched on length across subjects. This means that some of the longer scans will be truncated to 7-minute scans prior to any preprocessing. We will include the following aspects of acquisition as covariates: manufacturer, sequence type, data collection site, truncated rsfMRI scan (yes/no).
 - ii. We have not yet begun identifying potential DKI datasets from Helpern R01AG027852.
 - iii. We have 8 fMRI and 3 DKI datasets that meet inclusion criteria for the present study from Joseph R01AG055132.
 - iv. Alzheimer Connectome data has not yet been released
 - v. fMRI and DKI data from ADNI have been downloaded and rsfMRI data preprocessing has begun in the case-control matched datasets identified thus far.
 - vi. Dr. Jensen's data analysis pipeline for DKI data is still being updated and study staff for the project will be trained on this new pipeline once it is updated.
 - c. Collect data in TBI+ and TBI- subjects (Milestone 4).
 - i. Screen and test TBI+ and TBI- subjects: We have consented and screened 4 TBI+ subjects (as of 9/30/19).
 - ii. MRI scanning in TBI+ and TBI- subjects: Of the 4 TBI+ subjects enrolled, none have completed MRI scanning.
 - iii. PET scanning in TBI+ subjects: Of the 4 TBI+ subjects enrolled, none have completed PET scanning.

iv. PET scanning in TBI+ subjects: Of the 4 TBI+ subjects enrolled, none have completed PET scanning.

4) Other achievements: Nothing to report

5) Stated Goals Not Met: We have not met our original targeted recruitment goal as of 9/30/19, which was to enroll 24 of the 60 total subjects by the end of the first year. This is partly due to the delay in receiving HRPO approval. We had anticipated receiving HRPO approval by the end of the first quarter but we did not receive it until the beginning of the third quarter. Given this delay, we had anticipated enrolling 14 subjects by the end of the first year, but current enrollment is 4 TBI+ subjects. However, since 9/30/19 (the end of Year 1), 8 additional potential TBI+ subjects have been pre-screened and are eligible, so they are currently being scheduled for visits. MRI and PET scanning have been delayed because we are waiting for issues related to grant charges for PET scanning to be resolved at our institution. Although we can proceed with MRI scanning, for subject convenience and to minimize time burden, we would like to schedule PET and MRI scanning on the same day. We anticipate that issues related to PET scanning charges will be resolved at the beginning of the next quarter.

We have also been actively recruiting and attempting to schedule TBI- participants, with a focus on those who also have PTSD due to the high co-morbidity with TBI and given our plans to match TBI+ and TBI- subjects on PTSD status. However, one of the barriers to recruitment of TBI- subjects is that we have been awaiting approval of an amendment to our IRB protocol from our institution since August 31, 2019. This amendment includes the addition of an instrument to assess severity of substance and alcohol use disorders in TBI- subjects (the MINI). Once IRB approval is

What opportunities for training and professional development has the project provided?

Nothing to Report

How were the results disseminated to communities of interest?

Nothing to Report

What do you plan to do during the next reporting period to accomplish the goals?

During the next reporting period we will continue to recruit and test both TBI+ and TBI- subjects. We will also continue to identify existing AD and matched-control fMRI and DKI datasets and conduct preprocessing of that data. Another goal is for the Data Manager to receive training on the DKI data processing pipeline.

4. IMPACT:

What was the impact on the development of the principal discipline(s) of the project?

Nothing to Report

What was the impact on other disciplines?

Nothing to Report

What was the impact on technology transfer?

Nothing to Report

What was the impact on society beyond science and technology?

Nothing to Report

5. CHANGES/PROBLEMS:**Changes in approach and reasons for change**

From the initial submission of the human subjects protocol to HRPO, we have modified the age range of the TBI+ and TBI- subjects from 18-64 years to 30-65 years and the age range of AD+ and AD- subjects from 55-90 years to 55-85 years in order to have some overlap in age range across the subject groups. We have also changed TBI severity from mild-moderate to mild-severe in order to capture cognitive impairment in TBI+ subjects that is more likely to be accompanied by changes in brain function. We added Mini Mental State Exam (MMSE) minimum score (28) to inclusion criteria for all controls. In the original protocol, we had stated that a Clinical Dementia Rating scale score of 0 was required. However, for any subjects for whom we do not conduct chart reviews, we have opted to use the MMSE due to its ease of administration. We have also added the Test of Memory Malingering (TOMM) to the neuropsychological battery in order to have a way to measure fabrication or exaggeration of poor cognitive performance, which is anticipated in the TBI+ sample. In the currently pending amendment, we are adding sections from the Mini International Neuropsychiatric Interview (MINI) to assess SUD severity in any TBI+ or TBI- subjects for whom we are not able to conduct chart reviews (i.e., if recruited through the community and charts are not available).

Actual or anticipated problems or delays and actions or plans to resolve them

One major delay in the first year of the award was the delay in receiving HRPO approval which delayed recruitment and enrollment by approximately 14 weeks. We will try to ramp up enrollment of subjects to catch-up to the original targeted enrollment in the SOW. Another delay has been issues of billing for PET charges at our institution. Dr. Joseph had a meeting with MUSC's Assistant Provost for Research Compliance and Regulatory Affairs on October 24, 2019 to discuss the issue. We hope to hear that this issue is resolved in the next 2 weeks. A final delay has been that MUSC's IRB is taking longer than usual to review and respond to the amendment we submitted on August 30, 2019. This is likely due to a combination of factors related to Hurricane Dorian (Charleston evacuation and IRB office damage due to the hurricane). This amendment included the assessment of substance / alcohol use severity. We need to have this amendment approved in order to evaluate whether TBI- subjects are eligible for the study (for TBI+ subjects, this can be determined from chart review). We have responded to the reviewer comments and are awaiting the next response, which we hope will be received within the next 2 weeks.

Changes that had a significant impact on expenditures

Nothing to report

Significant changes in use or care of human subjects, vertebrate animals, biohazards, and/or select agents**Significant changes in use or care of human subjects**

Amendment 1: submitted 9/27/18, approved 10/9/18; modified risks section of informed consent and protocol to include procedures for handling incidental findings from MRI scanning to be consistent both with MUSC's Center for Biomedical Imaging policy and the VA (when applicable to VA Veteran subjects).

Amendment 3: submitted 6/3/19, approved 6/21/19; modified inclusion/exclusion criteria for all study subjects to include medical exclusions that will ensure any cognitive or imaging differences between TBI subjects and controls can be attributed to TBI and not some other medical or psychiatric condition. These criteria were not fully specified in the version of the protocol submitted to HRPO (MRI-related exclusions, major medical, psychiatric or neurological illness, investigational medications in last 30 days, history of malignant disease in last 5 years, HIV history, prior amyloid-targeted therapy, new CNS medications in last 4 weeks, infectious disease affecting the brain or brain surgery, vascular dementia, currently enrolled in a clinical medication trial, subject lacks (in investigator's opinion) adequate cognitive capacity to complete psychometric testing, limited ability to read and speak English.

Amendment 7: submitted 8/30/19, approval pending; modifying exclusion criteria with respect to severity of Substance Use Disorder (SUD), and adding sections from the Mini International Neuropsychiatric Interview (MINI) to assess SUD. With the DSM-V, the criteria have changed from substance abuse and dependence, to mild, moderate and severe substance use disorder. This amendment brings these criteria up to date.

Significant changes in use or care of vertebrate animals

Not Applicable

Significant changes in use of biohazards and/or select agents

Not applicable

6. PRODUCTS:

- **Publications, conference papers, and presentations**

Journal publications.

Nothing to Report

Books or other non-periodical, one-time publications.

Nothing to Report

Other publications, conference papers and presentations.

Nothing to Report

- **Website(s) or other Internet site(s)**

Nothing to Report

- **Technologies or techniques**

Nothing to Report

- **Inventions, patent applications, and/or licenses**

Nothing to Report

- **Other Products**

Nothing to Report

7. PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS

What individuals have worked on the project?

Name: Jane Joseph, PhD

Project Role: PI

Research Identifier: ORCID: 0000-0002-8180-7206 / eRA Commons: JANEJOSEPH

Nearest person month worked: 1

Contribution to Project: Dr. Joseph has served as the MUSC site PI. She has overseen the establishment of MRI scanning procedures as well as querying of the ADNI database and preliminary analyses.

Name: Olga Brawman-Mintzer, MD

Project Role: PI

Research Identifier: eRA Commons: MINTZERO

Nearest person month worked: 1

Contribution to Project: Dr. Brawman-Mintzer has served as the VAMC site PI. She has conducted all chart reviews, neurological and physical exams, and TBI assessments.

Funding Support: 2% VA support

Name: Katy Donovan

Project Role: Study Coordinator

Research Identifier:

Nearest person month worked: 1

Contribution to Project: Ms. Donovan has worked as the VA site study coordinator. She has recruited, screened, and consented all study participants to date.

Name: Laura Lohnes

Project Role: Study Coordinator

Research Identifier:

Nearest person month worked: 1

Contribution to Project: Ms. Lohnes has worked as the MUSC site study coordinator. She has performed at the neuropsychological testing to date. She has also assisted with all regulatory submissions for the project.

Funding Support: R01AG05513

Name: Brandon Vaughan

Project Role: Data Manager

Research Identifier:

Nearest person month worked: 1

Contribution to Project: Mr. Vaughan has queried the ADNI database for AD+ subjects to be used in analyses. He has also attended FITBIR Deep Dives and uploaded all data to the FITBIR repository.

Has there been a change in the active other support of the PD/PI(s) or senior/key personnel since the last reporting period?

Jane Joseph, PhD Support changes:

DOD W81XWH13-2-0075 (co-I) now closed.
 DOD/VA 1I01CX001288 (co-I) now closed.
 NIH/NIDA P50 DA106511 (co-I) now closed.
 DOD AZ170080 (contact PI) now active.
 NIH/NIAAA R01 AA027212(co-I) now active.

Olga Brawman-Mintzer, MD:

DOD AZ170080 (co-PI) now active.

Jens Jensen, PhD:

DOD AZ170080 now active (co-I).
 NIH/NINDS R01NS110347 (co-I) now active.

Brian Dean, PhD (Co-I):

NIH/NIA RTT5214 now closed.
 DOD AZ170080 now active.

What other organizations were involved as partners?

Organization Name: Medical University of South Carolina

Location of Organization: Charleston, SC

Partner's contribution to the project: In-kind support, facilities, collaboration, personnel exchanges

Organization Name: Ralph H. Johnson VAMC

Location of Organization: Charleston, SC

Partner's contribution to the project: In-kind support, facilities, collaboration, personnel exchanges

Organization Name: Clemson University

Location of Organization: Clemson, SC

Partner's contribution to the project: Collaboration, personnel exchanges

8. SPECIAL REPORTING REQUIREMENTS

COLLABORATIVE AWARDS:

QUAD CHARTS: Attached.

9. APPENDICES: Dr. Sudie Back's curriculum vitae is included.

CURRICULUM VITAE

Sudie E. Back, Ph.D.

Department of Psychiatry & Behavioral Sciences
Medical University of South Carolina
5 Charleston Center Drive, Suite 151
Charleston, SC 29425

Phone: 843-792-9383
Fax: 843-792-5932
Citizenship: United States
Email: backs@musc.edu

EDUCATION

2004	Ph.D.	Clinical Psychology, University of Georgia, Athens, GA
2003	Internship	Yale University School of Medicine, New Haven, CT
1997	M.A.	Clinical Psychology, Radford University, Radford, VA
1995	B.S.	Psychology, College of Charleston, Charleston, SC

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ACADEMIC APPOINTMENTS

2014 – present	Professor, Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, Charleston SC.
2011 – present	Staff Psychologist, Ralph H. Johnson VA Medical Center, Mental Health Service Line, Charleston, SC.
2009 – 2014	Associate Professor, Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, Charleston SC.
2005 – 2008	Assistant Professor, Department of Psychiatry and Behavioral Sciences Medical University of South Carolina, Charleston SC.
2004 – 2005	NIDA T32 Postdoctoral Fellow, Department of Psychiatry and Behavioral Sciences Medical University of South Carolina, Charleston SC.
2002 – 2003	Intern, Yale University School of Medicine, Department of Psychiatry, Substance Abuse Treatment Unit, New Haven, CT.

ADMINISTRATIVE APPOINTMENTS

2019– present	Co-Director, Pilot Project Core, Alcohol Research Center, Medical University of South Carolina, Charleston, SC.
2016 – 2019	Co-Director, NIDA T32 Postdoctoral Fellowship Program, Medical University of South Carolina, Charleston SC.
2013 – 2017	Co-Director, NIDA K12 Faculty Career Development Program in Drug Abuse, Medical University of South Carolina, Charleston SC.
2011 – present	Director, Drug Abuse Research Training (DART) programs, Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, Charleston SC.
2005 – 2010	Associate Director, Drug Abuse Research Training (DART) programs, Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, Charleston SC.

AWARDS AND HONORS

2011	Invited Keynote Speaker, NIDA Mentored K-Awardees Meeting: Nuts and Bolts of Building Research Independence
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2010	Fulbright Scholar Award, University of New South Wales, Australia
2009	Career Mentor Award, Department of Psychiatry, MUSC
2009	American Psychological Association (APA), Division 50, Early Career Award
2008	American College of Neuropsychopharmacology (ACNP) Early Career Travel Award
2005	NIDA/APA Early Career Investigators Travel Award
2004	Boardman-Forehand-Jackson Award, University of Georgia
2004	Herbert Zimmer Scholar Award, University of Georgia
2003	Excellence in Research Award, University of Georgia
2002	W. Isaac Travel Award, University of Georgia
2002	Dissertation Award, Association for Advancement of Behavior Therapy (ABCT)
2001, 2002	NIDA Director's Travel Award
2001, 2005	NIDA Women and Gender Junior Investigator Travel Award
1999	American Psychological Association (APA) Travel Award
1994	Psi Chi, National Honor Society
1993	Foreign Exchange, Dean's List, University of Puerto Rico, San Juan, PR
1990	SC Governor's School for the Arts, Furman University, SC

EXTRAMURAL GRANT SUPPORT

Ongoing Research Support

I01CX001506	Flanagan (PI)	2019-2024
Department of Veterans Affairs Clinical Sciences Research & Development		
<i>Enhancing Prolonged Exposure Therapy for PTSD with Oxytocin</i>		
This study is testing the ability of oxytocin to augment response to PE therapy in veterans.		
Role: Co-Investigator		
R01 AA027212	Flanagan (PI)	09/20/18-06/30/23
NIH/NIAAA		
<i>Oxytocin to Enhance Alcohol Behavioral Couple Therapy</i>		
This study examines the ability of oxytocin to augment Alcohol Behavioral Couple Therapy.		
Neuroimaging at pre- and post-treatment will examine neural correlates of treatment response.		
Role: Co-Investigator		
R01 AA025853	Morgan-Lopez & Hien (PIs); Back (Site PI)	06/01/18-05/31/22
NIH/NIAAA		
<i>Meta-analysis of Individual Patient Data for PTSD/Alcohol and Other Drugs</i>		
The goal of this project is to compare the efficacy of evidence-based treatment models for comorbid PTSD and substance use disorders, and test for potential mediators and moderators of treatment effects.		
Role: Site Principal Investigator		
R43 MH122045	Harley & Back (PIs)	09/12/19-08/31/21
NIH/NIMH		
<i>Intelligent Biometrics to Optimize Prolonged Exposure Treatment for PTSD (IB-PE)</i>		
This study will develop and test a novel mobile technology system to optimize patient engagement, retention and clinical outcomes during PE therapy.		
Role: Principal Investigator		

R01 AA025086 **Back, Gray & Santa Ana (PIs)** 08/10/16-07/31/21
 NIH/NIAAA

Randomized Controlled Trial of N-Acetylcysteine for Alcohol Use Disorder and Comorbid PTSD
 Testing the efficacy of N-acetylcysteine (NAC) in reducing alcohol use disorder and PTSD severity.
 Applying fMRI and MR spectroscopy at pre and post treatment.
 Role: Principal Investigator

R25 DA020537 **Back & Brady (PIs)** 05/26/06-05/31/21
 NIH/NIDA

Drug Abuse Research Training (DART) Program
 This award expands the research track in the medical residency program, as well as the Summer
 Research Fellowship for medical students and undergraduates.
 Role: Principal Investigator and Director

I01 CX001288 **Back (PI)** 10/01/15-09/30/20

VA/Department of Defense - Consortium to Alleviate PTSD (CAP)
Doxazosin in the Treatment of Co-occurring PTSD and Alcohol Use Disorders
 Testing the effects of doxazosin on reducing PTSD and alcohol use disorder severity. Applying
 fMRI to identify predictors of outcome and determine the effects of treatment on neural activity.
 Role: Principal Investigator

R01 AA025086-03S1 **Back (PI)** 09/01/18-07/31/20
 NIH/NIAAA

Research Supplement to Promote Diversity in Health-Related Research
 This diversity supplement affords the PI the opportunity to mentor Dr. Delisa Brown in the area of
 alcohol, PTSD, and race-based trauma.
 Role: Principal Investigator and Mentor

K02 DA039229 **Back (PI)** 07/01/15-06/30/20
 NIH/NIDA

Integrating Neurobiology and Neuroimaging into Research on Addiction and PTSD
 Advancement and training in the areas of neuroimaging and the neurobiology of PTSD and substance
 use disorders.
 Role: Principal Investigator

R21 DA044503 Hanlon (PI) 08/15/18-07/31/20
 NIH/NIDA

Developing Brain Stimulation as a Treatment for Pain in Opioid Dependent Individuals
 This study will evaluate novel non-invasive brain stimulation strategies to mitigate pain and the
 brain's response to pain in patients currently taking chronic opioids.
 Role: Co-Investigator

Completed Research Support

W81XWH-13-2-0075 Mitchell (PI); **Back** (Site PI) 02/01/16-06/30/19
 CDMRP-US Army/Dept of Defense; UCSF holds Prime Award

Glial Regulators for Treating Comorbid PTSD and Substance Use Disorders
 This study will determine the efficacy of N-acetylcysteine in treating PTSD and substance use
 disorders. Applying fMRI and MR spectroscopy at pre- and post-treatment.
 Role: Site Principal Investigator

- R01 DA030143 **Back (PI)** 08/01/10-05/31/16
 NIH/NIDA
Integrated Treatment of OEF/OIF Veterans with PTSD and Substance Use Disorders
 This project test the effects of an integrated psychosocial intervention ("COPE") designed to treat substance use disorders and co-occurring PTSD using Prolonged Exposure.
 Role: Principal Investigator
- K12 DA031794 Brady (PI) 01/05/13-01/01/18
 NIH/NIDA
Clinical Scientists Training Program in Addictions at MUSC
 This project will establish an intensive program of mentored clinical drug abuse research training.
 Role: Co-Investigator and Co-Director
- W81XWH-12-2-0048 McGinty (PI) 01/06/14-06/30/16
 Department of Defense
Oxytocin Suppresses Substance Use Disorders Associated with Chronic Stress
 The goal of this study is to determine the effects of intranasal oxytocin on craving and laboratory-induced stress among Veterans with alcohol use disorders and comorbid PTSD.
 Role: Co-Investigator and clinical site PI
- R01 DA038971 Borckardt & **Back (PIs)** 08/15/14-07/31/16
 NIH/NIDA
RCT of tDCS-Augmented CBT for Veterans with Pain and Opioid Misuse
 This project will evaluate the effects of tDCS and CBT in improving prescription opioid use severity and pain in Veterans.
 Role: Co-Principal Investigator
- R25 AA021363 Book (PI) 02/01/14-06/30/16
 NIH/NIAAA
Development and Evaluation of a Web-Based Psychiatry Resident Alcohol Curriculum
 This project aims to develop and evaluate a web-based curriculum to teach residents about alcohol use disorders.
 Role: Co-I
- W81XWH-11-2-0145 Kalivas (PI) 07/06/12-06/30/14
 Department of Defense
Glial Regulators for Treating Comorbid PTSD and Substance Use Disorders
 This proof-of-principle study will test the efficacy of N-acetylcysteine in treating Veterans with PTSD and substance use disorders.
 Role: Co-Investigator
- R01 DA023187 Hien (PI) 07/01/08-06/30/13
 NIH/NIDA
Concurrent Treatment for Substance Dependent Individuals with PTSD
 This project will test an integrated PTSD/substance use therapy ("COPE") as compared to relapse prevention.
 Role: Therapy Trainer/Supervisor

- K23 DA021228 **Back (PI)** 07/01/07-10/30/12
 NIH/NIDA
Translational Research Training: Stress and Addictions
 This project is designed to identify reactivity (subjective, physiological and neuroendocrine) to acute psychological stress and drug cues in individuals with prescription opioid use disorder. A parallel basic science study will examine stress and conditioned drug cues in rats addicted to heroin.
 Role: Principal Investigator
- P50 DA016511 Brady & See (PIs) 09/15/02-06/30/12
 NIDA/ORWH
Specialized Center of Research (SCOR) on Sex and Gender Factors Affecting Women's Health
 This project investigates gender difference in response to cocaine cues and laboratory stress among individuals with cocaine use disorder.
 Role: Co-Investigator
- R25 DA020537 Brady (PI) 05/26/06-04/30/11
 NIH/NIDA
Drug Abuse Research Training (DART) Program
 This project will establish a research track in the psychiatry residency program in order to help increase the numbers of physician-scientists conducting clinical research.
 Role: Co-Investigator and Associate Director
- R21 AA019019-01 Saladin (PI) 10/01/09-09/31/11
 NIH/NIAAA
Treatment Implications of Trauma Memory Modulation for PTSD and Alcohol Dependence
 This study will establish cue reactivity/exposure methodology to assess the therapeutic potential of a promising adjunctive pharmacotherapy for PTSD and alcohol use disorder.
 Role: Co-Investigator
- R21 DA026085 Brady & George (PIs) 09/15/08-08/31/10
 NIH/NIDA
The Impact of Real-Time fMRI Feedback on Response to Nicotine Cues
 The goal of this project is to develop the imaging parameters, brain-computer interface, and standardized procedures for using real-time fMRI with visual feedback to help decrease craving.
 Role: Co-Investigator
- Project ID 3834 **Back (PI)** 05/16/10-06/13/10
J. William Fulbright U.S. Scholars Program
 This project will allow the PI to visit and collaborate with researchers at the National Drug and Alcohol Research Centre at the University of New South Wales, Sydney, Australia.
 Role: Principal Investigator
- 455209 Mills (PI) 01/01/07-12/31/09
 NHMRC (National Health and Medical Research Council)
The Efficacy of an Intervention for PTSD among Illicit Drug Users
 This study investigates an integrated treatment for PTSD and substance use disorders ("COPE") among individuals with substance use disorders in Sydney, Australia.
 Role: Co-Investigator

F31 DA00607 **Back (PI)** 09/30/00-05/08/04
 NIDA

Cocaine Dependence and PTSD: The Role of Stress Reactivity

This project examines differences in subjective and physiological stress reactivity among individuals with cocaine use disorder, with and without comorbid PTSD.

Role: Principal Investigator

INTRAMURAL GRANT SUPPORT

South Carolina Clinical & **Back (PI)** 05/01/12-05/31/13
 Translational Research

PTSD and Addiction: Neural Mechanisms of Integrated Treatment Response

Examination of the effects of integrated treatment using fMRI trauma and substance use cues.

Role: Principal Investigator

Center for Health Disparities **Back (PI)** 12/01/07-09/30/08

Gender Disparities in Prescription Opioid Abuse

Investigation of gender differences in response to cues and reasons for using prescription opioids.

Role: Principal Investigator

Specialized Center of Research **Back (PI)** 07/01/05-06/30/06

CBT for Stress Management among Substance Dependent Individuals

Developed and examined the efficacy of a brief stress management intervention on subjective and physiological reactivity in patients with substance use disorders.

Role: Principal Investigator

PUBLICATIONS

*Denotes trainee/mentee. #Denotes research assistant/employee.

1. Barrett, E.* , Adams, A., Kelly, E., Peach, N., Hopkins, R., Milne, B., **Back, S.E.**, & Mills, K. (in press). Service provider perspectives on treating adolescents with co-occurring PTSD and substance use: Challenges and rewards. *Advances in Dual Diagnosis*.
2. Tripp, J.C., Jones, J.L.* , **Back, S.E.** & Norman, S.B. (2019). Dealing with complexity and comorbidity: Comorbid PTSD and substance use disorders. *Current Treatment Opinions in Psychiatry*, 6(3), 188-197.
3. Leone, R.M., Jarnecke, A.M., **Back, S.E.**, Brady, K.T., Flanagan, J.C. (2019) The moderating role of infidelity on the relation between oxytocin and conflict behaviors among substance misusing couples. *Experimental and Clinical Psychopharmacology*. Epub ahead of print. PMID: 31556677.
4. Dowdle, L.T., Borckardt, J.J., **Back, S.E.**, Morgan, K., Adams, D., Madan, A., Balliet, W., Hanlon, C.A. (2019) Sensitized brain response to acute pain in patients using prescription opiates for chronic pain: A pilot study. *Drug and Alcohol Dependence*. Epub ahead of print. PMID: 31071496
5. Flanagan, J.C.* , Joseph, J.E., Niertert, P.J., **Back, S.E.**, McCrady, B.S. (2019). Design of a randomized controlled trial examining the efficacy of oytocin to enhance alcohol behavioral couple therapy. *Contemporary Clinical Trials*. Epub ahead of print. PMID: 31063869
6. Lancaster, C.L., Gros, D.F., Mullarkey, M.C., Badour, C.L., Killeen, T.K., Brady, K.T., & **Back, S.E.** (2019). Does trauma-focused exposure therapy exacerbate symptoms among patients with comorbid PTSD and substance use disorders? *Behavioural Cognitive Psychotherapy*. Epub available ahead of print. PMID:31010449.

7. Flanagan, J.C.*, Allan, N.P., Calhoun, C.D., Badour, C.L., Moran-Santa Maria, M., Brady, K.T., & **Back, S.E.** (2019). Effects of oxytocin on stress reactivity and craving in veterans with co-occurring PTSD and alcohol use disorder. *Experimental and Clinical Psychopharmacology*, 27(1), 45-54. PMID: 30382728.
8. Jeffirs, S.M.#, Jarnecke, A.M.*, Flanagan, J.C.*, Killeen, T.K., Laffey, T.F., **Back, S.E.** (2019) Veterans with PTSD and comorbid substance use disorders: Does single versus poly-substance use disorder affect treatment outcomes? *Drug and Alcohol Dependence*. 199, 70-75. PMID 31009834.
9. Gilmore, A.K.*, Guille, C., Baker, N.L., Brady, K.T., Hahn, C.K.*, Davis, C.M.#, McCauley, J. & **Back, S.E.** (2019) Gender differences in subjective stress and neuroendocrine response to a stress task among individuals with prescription opioid use disorder: A pilot study. *Addictive Behaviors*. 92, 148-154. PMID:30640146.
10. **Back, S.E.**, Killeen, T., Badour, C.L., Flanagan, J.C.*, Allan, N.P., Santa Ana, E.J., Lozano, B., Korte, K.J.*, Foa, E.B., & Brady, K.T. (2019) Concurrent treatment of PTSD and substance use disorders using prolonged exposure: A randomized clinical trial in military veterans. *Addictive Behaviors*. 90, 369-377. PMID: PMC6488423.
11. Flanagan, J.C.*, Yonce, S., Calhoun, C.D., **Back, S.E.**, Brady, K.T., & Joseph, J.E. (2018) Preliminary development of a neuroimaging paradigm to examine neural correlates of a relationship conflict. *Psychiatry Research Neuroimaging*. 283, 125-134. PMID: 30581042.
12. Jarnecke, A.M.*, Allan, N.P., Badour, C.L., Flanagan, J.C.*, Killeen, T.K. & **Back, S.E.** (2018). Substance use disorders and PTSD: Examining substance use, PTSD symptoms, and dropout following imaginal exposure. *Addictive Behaviors*. 90, 35-39. PMID: 30355535.
13. Szafranski, D.D., Gros, D.F., Acierno, R., Brady, K.T., Killeen, T.K., & **Back, S.E.** (2018). Heterogeneity of treatment dropout: PTSD, depression and alcohol use disorder reductions in PTSD and AUD/SUD treatment non-completers. *Clinical Psychology & Psychotherapy*. 26(2), 218-226. PMID: 30419153.
14. Flanagan, J.C.*, Jarnecke, A.*, Jones, J.L.*, & **Back, S.E.**, (2018). Behavioral treatments for alcohol use disorder and PTSD. *Alcohol Research: Current Reviews*. 39(2), 1-16.
15. Solomon, D.T., Nietert, P.J., Calhoun, C., Smith, D.W., **Back S. E.**, Barden, E.#, Brady, K.T., & Flanagan, J.C.* (2018). Effects of oxytocin on emotional and physiological responses to a conflict resolution task in couples with substance misuse. *Couple and Family Psychology: Research and Practice*. 7(2), 91-102. PMID: 30740265.
16. **Back, S.E.**, Killeen, T., & Brady, K.T. (2019) COPE: Overview of an exposure-based treatment of PTSD and substance use disorders. In A. Vujanovic and S. Back, *Posttraumatic Stress and Substance Use Disorders: A Comprehensive Clinical Handbook*. New York, NY: Routledge.
17. Morley, K.C., Baillie, A., van den Brink, W., Chitty, K., Brady, K.T., **Back, S.E.**, Seth, D., Sutherland, G., Leggio, L. & Haber, P.S. (2018). N-acetyl cysteine in the treatment of alcohol use disorder in patients with liver disease: Rationale for further research. *Expert Opinion On Investigational Drugs*. 27(8), 667-675. PMID: 30019966.
18. Jones, J.L.*, Mateus, C.F., Malcolm, R.J., Brady, K.T., & **Back, S.E.** (2018). Efficacy of ketamine in the treatment of substance use disorders: A systematic review. *Frontiers in Psychiatry*, 9, 277. PMID: PMC6094990
19. Tomko, R.L., Jones, J.L.*, Gilmore, A.K.*, Brady, K.T., **Back, S.E.**, & Gray, K.M. (2018). N-acetylcysteine: A potential treatment for substance use disorders. *Current Psychiatry*, 17(6), 30-36, 41-42, 55. PMID: PMC5993450
20. Gilmore, A.K.*, Jones, J.L.*, Moreland, A.D., Hahn, C.K.*, Brady, K.T., & **Back, S.E.** (2018). Gender moderates the association between distress tolerance and alcohol use among individuals with opioid use disorder. *Drug and Alcohol Dependence*, 190, 9-12. PMID: 29960920.

21. **Back, S.E.** & Jones, J.L.* (2018). Alcohol use disorder and PTSD: An Introduction. *Alcoholism: Clinical & Experimental Research*, 42(5), 836-840. PMID: PMC5916040.
22. **Back, S.E.**, Flanagan, J.C.*, Jones, J.L.*, Augur, I.#, Peterson, A.L., Young-McCaughan, S., Shirley, D.W., Henschel, A.#, Joseph, J.E., Litz, B.T., Hancock, A.K., Roache, J.D., Mintz, J., Wachen, J.S., Keane, T.M., & Brady, K.T.; for the Consortium to Alleviate PTSD (2018). Doxazosin for the treatment of co-occurring PTSD and alcohol use disorder: Design and methodology of a randomized controlled trial in military veterans. *Contemporary Clinical Trials*, 73, 8-15. PMID: 30145268.
23. Flanagan, J.C.*, Sippel, L.M., Wahlquist, A., Moran-Santa Maria, M.M., & **Back, S.E.** (2018). Augmenting prolonged exposure therapy for PTSD with intranasal oxytocin: A randomized, placebo-controlled pilot trial. *Journal of Psychiatry Research*, 98, 64-69. PMID: PMC5800951.
24. Flanagan, J.C.*, Fischer, M.S., Nietert, P.J. Moran Santa-Maria, M.M., **Back, S.E.**, Snead, A., & Brady, K.T. (2018). Effects of oxytocin on cortisol reactivity and conflict resolution behaviors among couples with substance misuse. *Psychiatry Research*, 260, 346-352. PMID:29232576.
25. Bountress, K.E., Badour, C.L., Flanagan, J.C.*, Gilmore, A.K.*, & **Back, S.E.** (2017). Treatment of co-occurring posttraumatic stress disorder and substance use: Does order of onset influence outcomes? *Psychological Trauma: Theory, Research, Practice and Policy*. 10(6), 662-665. PMID: PMC5797521.
26. Flanagan, J.C.*, Fischer, M.S., Badour, C.L., Ornan, G.#, Killeen, T.K., **Back, S.E.** (2017). The role of relationship adjustment in an integrated individual treatment for PTSD and substance use disorders among veterans: An exploratory study. *Journal of Dual Diagnosis*, 13(3), 213-218. PMID: PMC5544565.
27. Gros, D.F., Lancaster, C.L., Horner, M.D., Szafranski, D.D., & **Back, S.E.** (2017). The influence of traumatic brain injury on treatment outcomes of Concurrent Treatment for PTSD and Substance Use Disorders Using Prolonged Exposure (COPE) in Veterans. *Comprehensive Psychiatry*, 78, 48-53. PMID: PMC5600865.
28. Ruglass, L.M., Lopez-Castro, T., Papini, S., Killeen, T., **Back, S.E.** & Hien, D.A. (2017). Concurrent treatment with prolonged exposure for co-occurring full or subthreshold posttraumatic stress disorder and substance use disorders: A randomized clinical trial. *Psychotherapy and Psychosomatic*, 86(3), 150-161. PMID: PMC5610572.
29. Mills, A.C.*, Badour, C.L., Korte, K.J.*, Killeen, T.K., Henschel, A.V.#, & **Back, S.E.** (2017). Integrated treatment of PTSD and substance use disorders: An examination of imaginal exposure length. *Journal of Traumatic Stress*, 30(2), 166-172. PMID: PMC5507581.
30. Korte, K.J.*, Bountress, K.E., Tomko, R.L., Killeen, T.K., Moran-Santa Maria, M., & **Back, S.E.** (2017). Integrated treatment of PTSD and substance use disorders: The mediating role of PTSD improvement in the reduction of depression. *Journal of Clinical Medicine*, 6(1), pii: E9. PMID: PMC5294962.
31. Campbell, A.N.C., **Back, S.E.**, Ostroff, J.S., Hien, D.S., Gourevitch, M., Sheffer, C., Brady, K.T., Hanley, K., Bereket, S., & Book, S. (2017). Addiction research training programs: Four case studies and recommendations for evaluation. *Journal of Addiction Medicine*, 11(5), 333-338. PMID: PMC5610081.
32. Teeters, J.B.*, Lancaster, C.L., Brown, D.G.*, & **Back, S.E.** (2017). Substance use disorders in military veterans: Prevalence and treatment challenges. *Substance Abuse and Rehabilitation*, 8, 69-77. PMID: PMC5587184.
33. Persson, A., **Back, S.E.**, Killeen, T.K., Brady, K.T., Schwandt, M.L., Heilig, M. & Magnusson, A. (2017). Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure (COPE): A pilot study in alcohol dependent women. *Journal of Addictive Medicine*, 11(2), 119-125. PMID: 28079572.
34. Jaconis, M.*, Santa Ana, L., Killeen, T.K., Badour, C. & **Back, S.E.** (2017). Concurrent treatment

- of PTSD and alcohol use disorder via telehealth in a female Iraq veteran. *American Journal on Addictions*, 26(2), 112-114. PMID: PMC5527553.
35. Szafranski, D.D., Snead, A.#, Allan, A.P., Gros, D.F., Killeen, T.K., Flanagan, J.C.*, Pericot-Valverde, I.*, & **Back, S.E.** (2017). Integrated, exposure-based treatment for PTSD and comorbid substance use disorders: Predictors of treatment dropout. *Addictive Behaviors*, 73, 30-35. PMID: PMC5507590.
 36. Badour, C.L., Flanagan, J.C.*, Gros, D.F., Killeen, T., Pericot-Valverde, I.*, Korte, K.J.*, & **Back, S.E.** (2017). Habituation of distress and craving during treatment as predictors of change in PTSD symptoms and substance use severity. *Journal of Consulting and Clinical Psychology*, 85(3), 274-281. PMID: PMC5328591.
 37. **Back, S.E.**, McCauley, J.L., Korte, K.J.*, Gros, D.F., Leavitt, V.#, Gray, K., Hamner, M., DeSantis, S.M., Malcolm, R., Brady, K.T., & Kalivas, P. (2016). A double-blind randomized controlled pilot trial of N-acetylcysteine in Veterans with PTSD and substance use disorders. *Journal of Clinical Psychiatry*, 77(11), e1439-e1446. PMID: PMC5226873.
 38. Lancaster, C.L., Teeters, J.B.*, Gros, D.F., & **Back, S.E.** (2016). Posttraumatic stress disorder: Overview of assessment and evidence-based treatments. *Journal of Clinical Medicine*, 5(11).
 39. **Back, S.E.**, McCauley, J.L., Barth, K.S.*, & Brady, K.T. (2016). *Opioids*. In A. Mack, Brady, K.T., Miller, S., & Frances, R.J. (eds.), *Clinical Textbook of Addictive Disorders* (4th ed.) New York, NY: Guilford Publications.
 40. Mills, K.L., Barrett, E.L.*, Merz, S., Rosenfeld, J., Ewer, P.L., Sannibale, C., Baker, A.L., Hopwood, S., **Back, S.E.**, Brady, K.T., & Teesson, M. (2016). Integrated exposure-based therapy for co-occurring posttraumatic stress disorder (PTSD) and substance dependence: Predictors of change in PTSD symptom severity. *Journal of Clinical Medicine*, 5(11), pii: E101. PMID: PMC5126798.
 41. Gros, D.F., Flanagan, J.C.*, Korte, K.J.*, Mills, A.C.*, Brady, K. T., & **Back, S. E.** (2016). Relations among social support, PTSD symptoms, and substance use in veterans. *Psychology of Addictive Behavior*, 30(7), 764-770. PMID: PMC5507582.
 42. Flanagan, J.C.*, Korte, K.J.*, Killeen, T.K., & **Back, S.E.** (2016). Concurrent treatment of substance use and PTSD. *Current Psychiatry Reports*, 18(8), 70. PMID: PMC4928573.
 43. Williams, E.M., Lorig, K., Glover, S., Kamen, D., **Back, S.E.**, Merchant, A., Zhang, J., & Oates, J.C. (2016). Intervention to improve quality of life for African-American lupus patients (IQAN): Study protocol for a randomized controlled trial of a unique a la carte intervention approach to self-management of lupus in African Americans. *BMC Health Services Research*, 2(16), 339. PMID: PMC4971708.
 44. Flanagan, J.C.*, Hakes, J.K., McClure, E.A., Snead, A.#, & **Back, S.E.** (2016). Effects of intimate partner violence, PTSD, and alcohol use on cigarette smoking in a nationally representative sample. *American Journal of Addiction*, 25(4), 283-290. PMID: PMC4934605.
 45. Adams, Z.W., McCauley, J.L., **Back, S.E.**, Hellmuth, J.C.*, Hanson, R.F., Killeen, T.K., & Danielson, C.M. (2016). Clinician perspectives on treating adolescents with co-occurring posttraumatic stress disorder, substance use, and other problems. *Journal of Child & Adolescent Substance Abuse*, 25(6), 575-583. PMID: PMC5100692.
 46. Brady, K.T., McCauley, J. & **Back, S.E.** (2016). Prescription opioid misuse, abuse, and treatment in the United States: An Update. *American Journal of Psychiatry*, 173, 18-26. PMID: PMC4782928.
 47. Gros, D.F., Korte, K.J.*, Horner, M.D., Brady, K.T., & **Back, S.E.** (2015). Co-occurring traumatic brain injury, PTSD symptoms, and alcohol use in Veterans. *Journal of Psychopathology and Behavioral Assessment*, 38(2), 266-273.
 48. **Back, S.E.**, Gros, D.F., Price, M., LaRowe, S., Flanagan, J.C.*, Brady, K.T., Davis, C., Jaconis, M.*, & McCauley, J.L. (2015). Laboratory-induced stress and craving among individuals with prescription opioid dependence. *Drug and Alcohol Dependence*, 155, 60-67. PMID:

PMC4582004.

49. Lozano, B.E., Gros, D.F., Killeen, T., Jaconis, M.*, Beylotte, F., Boyd, S., & **Back, S.E.** (2015). To reduce or abstain? Substance use goals in the treatment of Veterans with substance use disorders and comorbid PTSD. *American Journal on Addiction, 24*(7), 578-581. PMID: PMC4867466.
50. Bentzley, B.S., Barth, K.S.*, **Back, S.E.**, & Book, S. (2015). Patient perspectives associated with intended duration of buprenorphine maintenance therapy. *Journal of Substance Abuse Treatment, 56*, 48-53. PMID: PMC4519420.
51. Gros, D.F., Szafranski, D.D., Brady, K.T., & **Back, S.E.** (2015). Relations between pain, PTSD symptoms, and substance use in veterans. *Psychiatry: Interpersonal and Biological Processes, 78*, 277-287. PMID: PMC4867497.
52. Jobe-Shields, L., Flanagan, J.C.*, Killeen, T., & **Back, S.E.** (2015). Family composition and symptom severity among Veterans with comorbid PTSD and substance use disorders. *Addictive Behaviors, 50*, 117-123. PMID: PMC4570495.
53. Killeen, T.K., **Back, S.E.**, & Brady, K.T. (2015). Implementation of integrated therapies for comorbid post-traumatic stress and substance use disorders in community substance abuse treatment programs. *Drug and Alcohol Review, 34*(3), 234-241. PMID: PMC3646384.
54. Hellmuth, J.C.*, Teer, A.P.#, Beylotte, F., Killeen, T.K., & **Back, S.E.** (2015). Correlates of recent and lifetime aggression among treatment-seeking veterans dually diagnosed with posttraumatic stress and substance use disorders. *Mental Health and Substance Use, 7*(4), 315-328. PMID: PMC4240275.
55. Bentzley, B.S., Barth, K.S.*, **Back, S.E.**, & Book, S. (2015). Discontinuation of buprenorphine maintenance therapy: Perspectives and outcomes. *Journal of Substance Abuse Treatment, 52*, 48-57. PMID: PMC4382404.
56. Merghati-Khoei, E., Rimaz, S., Korte, J.E., **Back, S.E.**, Brady, K.T., Abad, M. & Shamsalizadeh, N. (2015). Intimate partner violence and risky sexual behaviors among Iranian women with substance use disorders. *MJIRI, 29*, 174. PMID: PMC4431434.
57. Cluver, J.S., Book, S.W., Brady, K.T., Thornley, N.# & **Back, S.E.** (2014). Engaging medical students in research: Reaching out to the next generation of physician-scientists. *Academic Psychiatry, 38*(3), 345-349. PMID: PMC4052462.
58. **Back, S. E.**, Gros, D. F., McCauley, J., Flanagan, J.C.*, Cox, E.Q.*, Barth, K.S.*, & Brady, K. T. (2014). Laboratory-induced cue reactivity among individuals with prescription opioid dependence. *Addictive Behaviors, 39*(8), 1217-23. PMID: PMC4059191
59. **Back, S.E.**, Killeen, T.K., Teer, A.P.#, Hartwell, E.E.*, Federline, A.#, Beylotte, F., & Cox, E.Q.* (2014). Substance use disorders and PTSD: An exploratory study of treatment preferences among military Veterans. *Addictive Behaviors, 39*, 369-373. PMID: PMC3855915.
60. McCauley, J.M., Mercer, M.A.#, Barth, K.S.*, Brady, K.T., & **Back, S.E.** (2014). Pain management perceptions among prescription opioid dependent individuals. *Drug and Alcohol Dependence, 142*, 354-358. PMID: PMC4127153.
61. Hartwell, E.E.*, Pfeifer, J.G., McCauley, J.L., Moran-Santa Maria, M.M., & **Back, S.E.** (2014). Sleep disturbances among individuals with prescription opioid dependence. *Addictive Behaviors, 39*(10), 1537-1542. PMID: PMC4324972.
62. Saladin, M.E., **Back, S.E.**, Payne, R.A.*, Schumm, J., Goldsmith, J. & Chard, K. M. (2014). Posttraumatic stress disorder and substance use disorder comorbidity. In R. Ries, D. Fiellin, S. Miller, & R. Saitz (eds.) *Principles of Addiction Medicine* (5th ed., pp 1403- 1417). Philadelphia, PA: Wolters Kluwer.
63. Barth, K.S.*, **Back, S.E.**, Moran-Santa Maria, M., Lawson, K.*, Shaftman, S., & Brady, K.T. (2013). Pain and motives for use among non-treatment seeking individuals with prescription opioid dependence. *American Journal on Addictions, 22*(5), 486-491. PMID: PMC3748383.

64. Gros, D.F., Milanak, M.E., Brady, K.T., & **Back, S.E.** (2013). Frequency and severity of comorbid mood and anxiety disorders in prescription opioid dependence. *American Journal on Addictions*, 22, 261-265. PMID: PMC3748383.
65. Lawson, K.*, **Back, S.E.**, Hartwell, K., Moran-Santa Maria, M., & Brady, K.T. (2013). A comparison of trauma profiles among individuals with prescription opioid, nicotine or cocaine dependence. *American Journal of Addictions*, 22(2), 127-131. PMID: PMC3681508.
66. McCauley, J.L., **Back, S.E.**, & Brady, K.T. (2013). Pilot of a brief, web-based educational intervention targeting safe storage and disposal of prescription opioids. *Addictive Behaviors*, 38, 2230-2235. PMID: PMC3635534.
67. McCauley, J.L., Killeen, T., Gros, D.F., Brady, K.T. & **Back, S.E.** (2012). Posttraumatic stress disorder and co-occurring substance use disorders: Advances in assessment and treatment. *Clinical Psychology: Science and Practice*, 19, 283-304. PMID: PMC3811127.
68. Brady, K.T., & **Back, S.E.** (2012). Childhood trauma, posttraumatic stress disorder and alcohol dependence. *Alcohol Research: Current Reviews*, 34(4), 408-413. PMID: PMC3860395.
69. Mills, K.L., Teesson, M., **Back, S.E.**, Brady, K.T., Baker, A.L., Hopwood, S., Sannibale, C., Barrett, E.L.*, Merz, S., Rosenfeld, J., & Ewer, P.L. (2012). Integrated exposure based therapy for co-occurring post traumatic stress disorder and substance dependence: A randomized controlled trial. *JAMA*, 308(7), 690-699. PMID: 22893166.
70. Hartwell, K.J., **Back, S.E.**, McRae-Clark, A.L., Shaftman, S.R., & Brady, K.T. (2012). Motives for using: A comparison of prescription opioid, marijuana and cocaine dependent individuals. *Addictive Behaviors*, 37(4), 373-378. PMID: PMC3288828.
71. Svikis, D.S., Keyser-Marcus, L., Stitzer, M., Rieckman, T., Safford, L.A., Loeb, P., Allen, T., Luna-Anderson, C., **Back, S.E.**, Cohen, J., DeBernardi, M.A., Dillard, B., Jaffee, W., Killeen, T., Kolodner, K., Levy, M., Perl, H.I., Pilgrim, E., Potter, J.S., Provost, S., Reese, K., Sampson, R.R., Sepulveda, A., Snead, N., & Zweben, J. (2012). Randomized multi-site trial of the Job Seekers' Workshop in patients with substance use disorders. *Drug and Alcohol Dependence*, 120, 55-64. PMID: PMC3579551.
72. **Back, S.E.**, Killeen, T., Foa, E.B., Santa Ana, E.J., Gros, D.F., & Brady, K.T. (2012). Use of an integrated therapy with prolonged exposure to treat PTSD and comorbid alcohol dependence in an Iraq Veteran. *American Journal of Psychiatry*, 169, 688-691. PMID: PMC3654811.
73. DeSantis, S.M., Spratt, E., **Back, S.E.**, Ciolino, J., Baker, N.L., Friedenborg, S., Moran-Santa Maria, M., & Brady, K.T. (2011). Gender differences in the effect of early life trauma on HPA axis functioning. *Depression and Anxiety*, 28(5), 383-392. PMID: PMC3243643.
74. Greenfield, S.F., **Back, S.E.**, Lawson, K.*, & Brady, K.T. (2011). Women and addiction. In Lowinson & Ruis (eds), *Substance Abuse: A Comprehensive Textbook* (5th ed.) (pp. 847-870). Philadelphia, PA: Lippincott Williams & Wilkins.
75. **Back, S.E.**, Payne, R.A.*, Wahlquist, A.H., Carter, R.E., Stroud, Z., Haynes, L., Hillhouse, M., Brady, K.T., & Ling, W. (2011). Comparative profiles of men and women with opioid dependence: Results from a national multisite effectiveness trial. *American Journal of Drug and Alcohol Abuse*, 37, 313-323. PMID: PMC3164783.
76. Killeen, T.K., **Back, S.E.**, & Brady, K.T. (2011). The use of exposure-based treatments among individuals with PTSD and co-occurring substance use disorders: Clinical considerations. *Journal of Dual Diagnosis*, 7(4), 194-206. PMID: PMC3646384.
77. Farrugia, P., Mills, K.L., Barrett, E.*, Rosenfeld, J., Merz, S., Teesson, M., Baker, A., Sannibale, C., Hopwood, S., **Back, S.E.**, & Brady, K.T. (2011). Childhood trauma among those with comorbid substance use and post traumatic stress disorder. *Mental Health and Substance Use*, 4(4):314-326. PMID: PMC3188414.
78. **Back, S.E.**, Lawson, K.*, Singleton, L.#, & Brady, K.T. (2011). Characteristics and correlates of men and women with prescription opioid dependence. *Addictive Behaviors*, 36, 829-834. PMID:

PMC3164361.

79. **Back, S.E.**, Book, S.W., Santos, A., & Brady, K.T. (2011). Training physician-scientists: A model for integrating research into psychiatry residency. *Academic Psychiatry*, *35*, 40-45. PMID: PMC3057642.
80. **Back, S.E.**, Waldrop, A.E., & Brady, K.T. (2010). Anxiety in the context of substance abuse. In D. Stein, E. Hollander & B.O. Rothbaum (eds.), *Textbook of Anxiety Disorders* (2nd ed.) (pp. 665-680). Arlington, VA: American Psychiatric Publishing.
81. Moran-Santa Maria, M, McRae-Clark, A.L., **Back, S.E.**, DeSantis, S.M., Spratt, E.G., Simpson, A.N., & Brady, K.T. (2010). Influence of cocaine dependence and early life stress on pituitary-adrenal axis responses to CRH and Trier social stressor. *Psychoneuroendocrinology*, *35*, 1492-1500. PMID: PMC2945624.
82. Waldrop, A.E., Price, K.L., DeSantis, S.M., Simpson, A.N., **Back, S.E.**, McRae, A.L., Kreek, M.J., & Brady, K.T. (2010). Community-dwelling cocaine-dependent men and women respond differentially to social stressors versus cocaine cues. *Psychoneuroendocrinology*, *35*, 798-806. PMID: PMC2875320.
83. **Back, S.E.**, Payne, R.A.*, Simpson, A.N., & Brady, K.T. (2010). Gender and prescription opioids: Findings from the National Survey on Drug Use and Health. *Addictive Behaviors*, *35*, 1001-1007. PMID: PMC2919630.
84. Banna, K.M., **Back, S.E.**, Do, P., & See, R.E. (2010). Yohimbine stress potentiates conditioned cue-induced reinstatement of heroin-seeking in rats. *Behavioral Brain Research*, *208*, 144-148. PMID: PMC2821948.
85. Greenfield, S.F., **Back, S.E.**, Lawson, K.#, & Brady, K.T. (2010). Substance abuse in women. *Psychiatric Clinics of North America*, *33*, 339-355. PMID: PMC3124962.
86. **Back, S.E.**, Hartwell, K., DeSantis, S.M., Saladin, M., McRae-Clark, A.L., Price, K.L., Moran-Santa Maria, M., Baker, N.L., Spratt, E., Kreek, M.J., & Brady, K.T. (2010). Reactivity to laboratory stress provocation predicts relapse to cocaine. *Drug and Alcohol Dependence*, *106*, 21-27. PMID: PMC2815094.
87. **Back, S.E.** (2010). Toward an improved model of treating co-occurring PTSD and substance use disorders. *American Journal of Psychiatry*, *167*, 11-13. PMID: PMC2859044.
88. Spratt, E. G., **Back, S.E.**, Waldrop, A.E., Yeatts, S., Simpson, A., McRae, A., Moran-Santa Maria, M., Price, K., Hartwell, K., & Brady, K.T. (2009). Relationship between child abuse and adult smoking. *International Journal of Psychiatry in Medicine*, *39*(4), 417-426. PMID: PMC3186351.
89. Brady, K.T., Tuerk, P., **Back, S.E.**, Saladin, M.E., Waldrop, A.E., & Myrick, H. (2009). Combat PTSD, substance use disorders, and traumatic brain injury. *Journal of Addiction Medicine*, *3*(4), 179-188. PMID: PMC4124907.
90. Price, K.L., McRae-Clark, A.L., Saladin, M.E., Moran-Santa Maria, M.M., DeSantis, S.M., **Back, S.E.**, & Brady K.T., (2009). D-cycloserine and cocaine cue reactivity: Preliminary findings. *American Journal of Drug and Alcohol Abuse*, *35*, 434-438. PMID: 2805418.
91. Payne, R.A.*, **Back, S.E.**, Wright, T., Hartwell, K., & Brady, K.T. (2009) Alcohol dependence in women: Comorbidities can complicate treatment. *Current Psychiatry*, *8*(6), 52-59. PMID: PMC2911821. PMID: 20676219.
92. DeSantis, S.M., Bandyopadhyay, D., **Back, S.E.**, & Brady, K.T. (2009). Non-treatment laboratory stress- and cue-reactivity studies are associated with decreased substance use among drug-dependent individuals. *Drug and Alcohol Dependence*, *105*(3), 227-233. PMID: PMC2875261.
93. **Back, S.E.**, Payne, R.A.*, Waldrop, A.E., Smith, A., Reeves, S., & Brady, K.T. (2009). Prescription opioid aberrant behaviors: A pilot study of gender differences. *Clinical Journal of Pain*, *25*, 477-484. PMID: PMC2771580.
94. **Back, S.E.** & Payne, R.A.* (2009). Gender and prescription opioids. In K.T. Brady, S.E. Back, & S. Greenfield (eds.), *Women and Addiction: A Comprehensive Handbook* (pp. 379-395). New York,

NY: Guilford Press.

95. **Back, S.E.**, Waldrop, A.E., & Brady, K.T. (2009). Treatment challenges associated with comorbid substance use and posttraumatic stress disorder: Clinicians' perspectives. *American Journal on Addictions, 18*, 15-20. PMID: PMC2845168.
96. Brady, K.T., McRae, A.L., Moran-Santa Maria, M.M., DeSantis, S.M., Simpson, A.N., Waldrop, A.E., **Back, S.E.**, & Kreek, M.J. (2009). Response to CRH Infusion in Cocaine-Dependent Individuals. *Archives of General Psychiatry, 66*(4), 422-430. PMID: PMC2696287.
97. Saladin, M.E., **Back, S.E.**, & Payne, R.A.* (2009). Posttraumatic stress disorder and substance use disorder comorbidity. In R. Ries, D. Fiellin, S. Miller, & R. Saitz (eds.) *Principles of Addiction Medicine* (4th ed., pp 1249-1262). Baltimore, MD: Lippincott Williams & Wilkins.
98. **Back, S.E.** & Brady, K.T. (2008). Anxiety disorders with comorbid substance use disorders: Diagnostic and treatment considerations. *Psychiatric Annals, 38*, 724-729. PMID: PMC2921723.
99. Dempsey, J., **Back, S.E.**, Waldrop, A.E., Jenkins, L., & Brady, K.T. (2008). The influence of monetary compensation on cocaine use following research participation. *American Journal on Addictions, 17*(6), 488-490. PMID: PMC2677021.
100. Najavits, L.M., Ryngala, D., **Back, S.E.**, Bolton, E., Mueser, K.T., & Brady, K.T. (2008). Treatment for PTSD and comorbid disorders: A review of the literature. In E.B. Foa, T. M. Keane, & M. J. Friedman (eds.), *Effective Treatments for PTSD* (2nd ed). New York, NY: Guilford Press.
101. **Back, S.E.**, Brady, K.T., Waldrop, A.E., Yeatts, S.D., McRae, A.L., & Spratt, E. (2008). Early life trauma and sensitivity to current life stressors in individuals with and without cocaine dependence. *American Journal of Drug and Alcohol Abuse, 34*, 1-8. PMID: PMC2692094.
102. Brady, K.T., & **Back, S.E.**, (2008). Women and addiction. In M. Galanter & H. D. Kleber (eds.) *Textbook of Substance Abuse Treatment* (4th ed., pp 555-564). Washington, DC: American Psychiatric Publishing.
103. **Back, S.E.**, Waldrop, A.E., Saladin, M.E., Yeatts, S., Simpson, A., McRae, A.L., Upadhyaya, H., Sisson, R.C., Spratt, E., Allen, J., Kreek, M.J., & Brady, K.T. (2008). Effects of gender and cigarette smoking on reactivity to psychological and pharmacological stress provocation. *Psychoneuroendocrinology, 33*(5), 560-568. PMID: PMC2446474.
104. Waldrop, A.E., **Back, S.E.**, Sensenig, A., & Brady, K.T. (2008). Sleep disturbances associated with posttraumatic stress disorder and alcohol dependence. *Addictive Behaviors, 33*, 328-335. PMID: PMC2099298.
105. Carter, R.E., Haynes, L. F., **Back, S.E.**, Herrin, A.E., Brady, K.T., Leimberger, J.D., Sonne, S.C., Hubbard, R.L., & Liepman, M.R. (2008). Improving the transition from residential to outpatient addiction treatment: Gender differences in response to supportive telephone calls. *American Journal of Drug and Alcohol Abuse, 34*, 47-59. PMID: PMC2633717.
106. **Back, S.E.**, Gentilin, S., & Brady, K.T. (2007). Cognitive-behavioral stress management for individuals with substance use disorders: A pilot study. *Journal of Nervous and Mental Diseases, 195*, 662-668.
107. Verduin, M.L., Payne, R.A.*, McRae, A.L., **Back, S.E.**, Simpson, S.A., Sarang, R.Y., & Brady, K.T. (2007). Assessment of club drug use in a treatment-seeking sample of individuals with marijuana dependence. *American Journal on Addiction, 16*, 484-487.
108. **Back, S.E.**, Chellis, A., Svikis, D., & Brady, K. T. (2007). Let 'em work, let 'em live: Workshop sessions can help clients overcome barriers to employment. *Addiction Professional, 5*(3), 22-28.
109. **Back, S.E.**, Contini, R., & Brady, K.T. (2006). Women and substance use disorders: Does gender matter? *Psychiatric Times, 24*(1), 48.
110. Waldrop, A.E., **Back, S.E.**, Verduin, M.L., & Brady, K.T. (2007). Triggers for cocaine and alcohol use in the presence and absence of posttraumatic stress disorder. *Addictive Behaviors, 32*(2), 634-639.
111. Waldrop, A.E., **Back, S.E.**, Brady, K.T., Upadhyaya, H.P., McRae, A.L., & Saladin, M.E. (2007).

- Daily stressor sensitivity, abuse effects, and cocaine use in cocaine dependence. *Addictive Behaviors*, 32 (12), 3015-3025.
112. Basile, K.C., Hertz, M.F., & **Back, S.E.** (2007). *Intimate Partner Violence and Sexual Violence Victimization Assessment Instruments for Use in Healthcare Settings: Version 1*. Center for Disease Control and Prevention, National Center for Injury Prevention and Control, Atlanta, GA.
 113. McRae, A.L., Saladin, M.E., Brady, K.T., Upadhyaya, U., **Back, S.E.**, & Timmerman, M.A. (2006). Stress reactivity: Biologic and subjective responses to the cold pressor and Trier social stressors. *Human Psychopharmacology: Clinical and Experimental*, 21(6), 377-385.
 114. **Back, S.E.**, Waldrop, A.E., Brady, K.T., & Hien, D. (2006). Evidenced-based time-limited treatment of co-occurring substance use disorders and civilian-related PTSD. *Brief Treatment and Crisis Intervention*, 6, 283-294.
 115. **Back, S.E.**, Brady, K.T., Sonne, S.C., & Verduin, M.L. (2006). Symptom improvement in co-occurring PTSD and alcohol dependence. *Journal of Nervous and Mental Disease*, 194, 690-696.
 116. Brady, K.T., Waldrop, A.E., McRae, A.L., **Back, S.E.**, Saladin, M.E., Upadhyaya, H.P., Anton, R.F., Randall, P.K. (2006). The impact of alcohol dependence and post-traumatic stress disorder on cold pressor task response. *Journal of Studies on Alcohol*, 67(5), 700-706.
 117. Brady, K.T., **Back, S.E.**, McRae, A.L., Waldrop, A.E., Anton, R.F., Upadhyaya, H.P., Saladin, M.E., Randall, P.K. (2006). Cold pressor task reactivity: Predictors of alcohol use among alcohol-dependent individuals with and without comorbid PTSD. *Alcoholism: Clinical and Experimental Research*, 30(6), 938-946.
 118. **Back, S.E.**, Brady, K.T., Jaanimägi, U., & Jackson, J. (2006). Cocaine dependence and PTSD: Symptom interplay and treatment preferences. *Addictive Behaviors*, 31(2), 351-354.
 119. Santa Ana, E.J., Saladin, M.E., **Back, S.E.**, Waldrop, A.E., Spratt, E.G., McRae, A.L., LaRowe, S.D., Timmerman, M.A., Upadhyaya, H., & Brady, K.T. (2006). PTSD and the HPA axis: Differences in response to the cold pressor task among individuals with child vs. adult trauma. *Psychoneuroendocrinology*, 31, 501-509.
 120. Back, S.E., Brady, K.T., Jackson, J.L., Salstrom, S., & Zinzow, H. (2005). Gender differences in stress reactivity among cocaine dependent individuals. *Psychopharmacology*, 180(1), 169-176.
 121. **Back, S.E.**, Jackson, J.L., Sonne, S., & Brady, K.T. (2005). Alcohol dependence and PTSD: Differences in clinical presentation and response to cognitive-behavioral therapy by order of onset. *Journal of Substance Abuse Treatment*, 29, 29-37.
 122. Brady, K.T., Sonne, S., Anton, R.F., Randall, C.L., **Back, S.E.**, & Simpson, K. (2005). Sertraline in the treatment of co-occurring alcohol dependence and PTSD. *Alcoholism: Clinical and Experimental Research*, 29(3), 395-401.
 123. Rounsaville, B.J., Carroll, K.M., & **Back, S.** (2005). Individual psychotherapy. In J.H. Lowinson, P. Ruiz, R.B. Millman, & J.G. Langrod (eds.), *Substance Abuse: A Comprehensive Textbook* (4th ed., pp. 653-671). New York: Lippincott Williams and Wilkins.
 124. Brady, K.T., **Back, S.E.**, & Coffey, S.C. (2004). Substance abuse and posttraumatic stress disorder. *Current Directions in Psychological Science*, 13(5), 206-209.
 125. Sonne, S.C., **Back, S.E.**, Diaz Zuniga, C., Randall, C. & Brady, K.T. (2003). Gender differences in individuals with comorbid alcohol dependence and posttraumatic stress disorder. *American Journal on Addictions*, 12, 412-423.
 126. **Back, S.E.**, Jackson, J.L., Fitzgerald, M., Shaffer, A., Salstrom, S., & Osman, M. (2003). Child sexual and physical abuse among college students in Singapore and the United States. *Child Abuse and Neglect: The International Journal*, 27(11), 1259-1275.
 127. **Back, S.E.**, Sonne, S.C., Killeen, T., Dansky, B.S., & Brady, K.T. (2003). Comparative profiles of women with PTSD and comorbid cocaine or alcohol dependence. *American Journal of Drug and Alcohol Abuse*, 29(1), 169-189.
 128. Brady, K.T., & **Back, S.E.** (2002). Gender and the psychopharmacologic treatment of PTSD. In

- R. Kimerling, P. Crosby Ouimette, & J. Wolfe (Eds.), *Gender and PTSD* (pp.335-348). New York, NY: Guilford.
129. **Back, S.E.**, Dansky, B.S., Carroll, K.M., Foa, E.B., & Brady, K.T. (2001). Exposure therapy in the treatment of PTSD among cocaine-dependent individuals: Description of procedures. *Journal of Substance Abuse Treatment*, *21*, 35-45.
 130. Brady, K.T., Dansky, B.S., **Back, S.E.**, Foa, E.B., & Carroll, K.M. (2001). Exposure therapy in the treatment of PTSD among cocaine-dependent individuals: Preliminary findings. *Journal of Substance Abuse Treatment*, *21*, 47-54.
 131. **Back, S.**, Dansky, B.S., Coffey, S.F., Saladin, M.E., Sonne, S.C., & Brady, K. T. (2000). Cocaine dependence with and without posttraumatic stress disorder: A comparison of substance use, trauma history, and psychiatric comorbidity. *American Journal on Addictions*, *9*, 51-62.
 132. Brady, K.T. & **Back, S.** (2000). New developments in drug therapies for substance use disorders. *Psychiatric Clinics of North America*, *7*, 187-199.
 133. **Back, S.** & Lips, H.M. (1998). Child sexual abuse: Victim age, victim gender, and observer gender as factors contributing to attributions of responsibility. *Child Abuse and Neglect*, *22*(12), 1239-1252.

BOOKS AND MANUALS

134. Vujanovic, A.A. & **Back, S.E.** (2019). *Posttraumatic Stress and Substance Use Disorders: A Comprehensive Clinical Handbook*. New York, NY: Routledge.
135. **Back, S.E.**, Foa, E.B., Killeen, T.K., Mills, K.L., Teesson, M., Carroll, K.M., Cotton, B.D., & Brady, K.T. (2014). *Concurrent Treatment of PTSD and Substance Use Disorders using Prolonged Exposure (COPE). Therapist Manual*. New York, NY: Oxford University Press.
136. **Back, S.E.**, Foa, E.B., Killeen, T.K., Mills, K.L., Teesson, M., Carroll, K.M., Cotton, B.D., & Brady, K.T. (2014). *Concurrent Treatment of PTSD and Substance Use Disorders using Prolonged Exposure (COPE). Patient Workbook*. New York, NY: Oxford University Press.
137. Brady, K.T., **Back, S.E.**, & Greenfield, S. (Eds). (2009). *Women and Addiction: A Comprehensive Handbook*. New York, NY: Guilford Press.

PRESENTATIONS

*Denotes trainee/mentee. #Denotes research assistant/employee.

1. Jeffirs, S.M.#, Jarnecke, A.M.*, Killeen, T.K., & **Back, S.E.** (2019, November). Investigating Posttraumatic Stress Disorder Symptom Clusters over the Course of Treatment. Poster accepted to the annual meeting of the Association for Behavioral and Cognitive Therapies, Atlanta, GA.
2. Leone, R.M., Jarnecke, A.M.*, **Back, S.E.**, Brady, K.T., & Flanagan, J.C.* (November 2019). The moderating role of infidelity on the relation between oxytocin and conflict behaviors among substance misusing couples. Paper to be presented in the symposium "Therapeutic Potential of Oxytocin for Improving Social-Cognitive Processes and Behavior in PTSD and Substance Use Disorders" at the 53rd Annual Convention of the Association for Behavioral and Cognitive Therapies, Atlanta, GA.
3. Compean, E.*, Hamner, M., Wang, Z., & **Back, S.E.** (2018, December) Dopamine Transporter (DAT1) Gene in Combat Veterans with PTSD. Presented at the American College of Neuropsychopharmacology Annual Meeting, Hollywood, FL.
4. Poole, L.Z., Flanagan, J.C.*, Jarnecke, A.M.*, **Back, S.E.**, & Brady, K.T. (2018, November) Emotion Regulation and Dyadic Adjustment in Couples with Substance Use Disorder. Presented at the annual meeting of the association for Behavioral and Cognitive Therapies, Washington, DC.

5. Jarnecke, A.M.*, Allan, N.P., Badour, C.L., Flanagan, J.C.*, Killeen, T.K., & **Back, S.E.** (2018, November). Posttraumatic stress disorder and substance use disorders: Examining dropout and substance use following imaginal exposures. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Washington, DC.
6. Ornan, G.Z.#, Jarnecke, A.M.*, Calhoun, C.D., Laffey, T.#, Davis, C.M.#, Flanagan, J.C.*, & **Back, S.E.** (2018, November). Integrated treatment for PTSD and substance use disorders: The impact of sexual trauma on outcome. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Washington, DC.
7. Teeters, J.B.* & **Back, S.E.** (2018, November) Sleep Moderates the Relationship Between Stress and Craving in Individuals With Prescription Opioid Use Disorder. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Washington, DC.
8. Jeffirs, S.M.#, Laffery, T.F.#, Jarnecke, A.M.*, Davis, C.M.#, Flanagan, J.C.*, Killeen, T., & **Back, S.E.** (2018, November) Compartmenting Treatment Outcomes for Single vs. Poly-Substance Use Disorders. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Washington, DC.
9. Davis, C.M.#, Jarnecke, A.M.*, Augur, I.F.#, Ornan, G.Z.#, Jeffirs, S.M.#, Killeen, T.K., **Back, S.E.** (2018, November). Associations between trauma type, race, and therapeutic alliance in a comorbid sample. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Washington, DC.
10. Elmquist, J.*, Santa Ana, E.J., & **Back, S.E.** (2018, November). The relationship between pre-deployment resiliency and posttraumatic stress disorder (PTSD) and substance use disorder (SUD) outcomes: Examining the moderating effect of treatment condition. Presented at the annual meeting of the International Society for Traumatic Stress Studies, Washington, DC.
11. Brown, D.G.*, Flanagan, J.C.*, Killeen, T.K. & **Back, S.E.** (2018, August). Ethnoracial differences in treatment outcomes for co-occurring disorders: Differences in treatment outcomes for OEF/OIF veterans with PTSD and substance use disorders. Presented at the annual meeting of the Military Health System Research Symposium, Kissimmee, FL.
12. Flanagan, J.C.*, Yonce, S.S., Calhoun, C., **Back, S.E.**, Brady, K.T., & Joseph, J.E. (2018, June). Development of a neuroimaging paradigm to examine neural correlates of relationship conflict among couples with substance use disorders. Presented at the annual meeting of the Research Society on Alcoholism, San Diego, CA.
13. Mitchell, H., Solomon., D.T., Jarnecke, A.*, Styles-Turbyfill, H., **Back, S.E.**, & Flanagan, J.C.* (2018, March). Women's desire to leave relationships when substance abuse is present. Poster presented at the Southeastern Psychological Association Annual Conference, Charleston, SC.
14. Ornan, G.Z.#, Flanagan, J.C.*, Henschel, A.V.#, Killeen, T.K., & **Back, S.E.** (November, 2017). Depression severity and therapeutic alliance in Veterans with PTSD and co-occurring substance use disorders. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, San Diego, CA.
15. Davis, C.M.#, Augur, I.F.#, Gilbert, E.A.*, Henschel, A.V.#, **Back, S.E.**, & Flanagan, J.C.* (2017, November). Supplementing Prolonged Exposure with endogenous oxytocin. Presented at the annual meeting of the International Society for Traumatic Stress Studies, Chicago, IL.
16. Augur, I.F.#, Henschel, A.V.#, Gilbert, E.A.*, Mills, A.C.*, Jeffirs, S.M.#, Flanagan, J.C.*, & **Back, S.E.** (November, 2017). Homework compliance predicts treatment outcome in an integrated therapy for co-occurring PTSD and substance use disorders. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, San Diego, CA.
17. Jeffirs, S.M.#, Gilbert, E.A.*, Augur, I.F.#, Flanagan, J.C.*, & **Back, S.E.** (November, 2017). Comorbid PTSD and substance use disorders: Examination of the relationship between PTSD severity and craving during treatment. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, San Diego, CA.

18. Lopez-Castro, T., Allan, N., Papini, S., **Back, S.E.**, Killeen, T., Gros, D., Barrett, E.*, Ruglass, L.M., & Hien, D. (June, 2017). Improving comorbid substance use and posttraumatic stress disorder treatments through methodological innovation: Combined symptom trajectories following treatment. Presented at the annual meeting of the College on Problems of Drug Dependence, Quebec, Canada.
19. Dowdle, L., Hamilton, S., Borckardt, J., **Back, S.E.**, Hanlon, C., (June, 2017). Evaluating LTP-like rTMS as a tool to reduce pain and craving in individuals with non-medical prescription opiate use. Presented at the annual meeting of the College on Problems of Drug Dependence, Montreal, Quebec, Canada.
20. Flanagan, J.C.*, Calhoun, C.D., Badour, C.L., Allen, N.P., Moran-Santa Maria, M.M., Brady, K.T., McGinty, J.F., & **Back, S.E.** (June, 2017). Effects of oxytocin on stress-induced alcohol craving and neurobiological reactivity among Veterans with co-occurring alcohol use disorder and PTSD. Presented at the annual meeting of the Research Society on Alcoholism, Denver, CO.
21. Lester, S.#, Joseph, J., Calhoun, C., **Back, S.E.**, Moran-Santa Maria, M., & Flanagan, J.C.* (May, 2017). Exploring gender differences in orbitofrontal cortex connectivity in response to dyadic conflict. Presented at the annual meeting of the Association for Psychological Science, Boston, MA.
22. Flanagan, J.C.*, Moran-Santa Maria, M., Messinger, J.#, & **Back, S.E.** (November, 2016). Augmenting prolonged exposure therapy for PTSD with intranasal oxytocin: Safety, feasibility, and acceptability. In Julianne C. Flanagan (Chair), Translational Perspectives on the Clinical Application of Oxytocin among Individuals with PTSD. Symposium presented at the annual convention of the International Society for Traumatic Stress Studies, Dallas, TX.
23. **Back, S.E.**, Flanagan, J.C*, Moran-Santa Maria, M.M., Henschel, A.V.#, Messinger, J.#, Brady, K.T., & McGinty, J.F. (November, 2016). Effects of oxytocin on stress reactivity and craving among Veterans with co-occurring PTSD and alcohol use disorders. In Julianne C. Flanagan (Chair), Translational Perspectives on the Clinical Application of Oxytocin among Individuals with PTSD. Symposium presented at the annual convention of the International Society for Traumatic Stress Studies, Dallas, TX.
24. **Back, S.E.**, Gros, D., Korte, K.*, Brady, K.T., & Kalivas P. (November, 2016). Treatment of PTSD and comorbid addiction with N-acetylcysteine. In Denise Hien (Chair), Integrative Approaches for Traumatic Stress Disorders and Addictions using CBT and Biological Interventions. Symposium presented at the annual convention of the International Society for Traumatic Stress Studies, Dallas, TX.
25. **Back, S.E.**, Killeen, T., Badour, C., Flanagan, J.C.*, Korte, K.*, & Brady, K.T. (November, 2016). Integrated Treatment of PTSD and addiction in Veterans using Prolonged Exposure. In Shannon Kehle-Forbes (Chair), The Treatment of Co-occurring PTSD and Substance-related Disorders. Symposium presented at the annual convention of the International Society for Traumatic Stress Studies, Dallas, TX.
26. Augur, I.F.#, Mithoefer, O.J., Dowdle, L.T., Henschel, A.V.#, **Back, S.E.**, & Hanlon, C.A. (November, 2016). Brain response to personalized trauma scripts in patients with post-traumatic stress disorder. Presented at the Trauma and PTSD Special Interest Group at the annual meeting of the Association for Behavioral and Cognitive Therapies, New York City, NY.
27. Henschel, A.V.#, Flanagan, J.C.*, Augur, I.F.#, & **Back, S.E.** (November, 2016). Motives for prescription opiate use: The role of alexithymia and distress tolerance. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, New York City, NY.
28. Henschel, A.V.#, Messinger, J.#, Flanagan, J.C.*, Augur, I.F.#, & **Back, S.E.** (November, 2016). The role of sleep quality and posttraumatic stress disorder on physical health in veterans. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, New York City, NY.

29. Barrett, E.* & **Back, S.E.** (October, 2016). Prevalence and psychotherapeutic treatment of PTSD and substance use disorders. Presented at the annual meeting of the American Society of Addictive Medicine, Washington, DC.
30. **Back, S.E.** & Henschel, A.V.# (October, 2016). N-acetylcysteine in the treatment of PTSD and substance use disorders. In Denise Hien (Chair), *Advances in Treatments for Traumatic Stress Disorders and Addictions Using Behavioral and Pharmacologic Approaches in Civilian and Veteran Populations*. Symposium presented at the annual convention of the Association for Behavioral and Cognitive Therapies, New York, NY.
31. Henschel, A.V.#, Korte, K.*, Badour, C., Flanagan, J.C.*, Gros, D.F., Killeen, T.K., & **Back, S.E.** (October, 2016). Mechanisms of change in PTSD symptoms and alcohol use during concurrent treatment for PTSD and substance use disorders using Prolonged Exposure. Symposium presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, New York City, NY.
32. Henschel, A.V.#, Messinger, J.#, Flanagan, J.C.*, & **Back, S.E.** (October, 2016). The role of sleep quality and posttraumatic stress disorder on physical health in veterans. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, New York, NY.
33. Henschel, A.V.#, Flanagan, J.C.*, Augur, I.F.#, & **Back, S.E.** (October, 2016). Motives for prescription opiate use: The role of alexithymia and distress tolerance. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, New York, NY.
34. Augur I.F.#, Mithoefer, O.J., Dowdle, L.T., Henschel, A.V.#, **Back, S.E.** & Hanlon, C.A. (October, 2016). Brain response to personalized trauma scripts in patients with post-traumatic stress disorder. Presented at Trauma and PTSD Special Interest Group at the Association for Behavioral and Cognitive Therapies, New York, NY.
35. Korte, K.J.*, Badour, C.L., Flanagan, J.C.*, Gros, D.F., Killeen, T. & **Back, S.E.** (October, 2016). Mechanisms of change in PTSD symptoms and alcohol use during Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure (COPE). In A. Asnaani (Chair), *Under the Influence: The Co-Occurrence of Substance Use Disorders with PTSD and Potential Mechanisms Maintaining their Comorbidity*. Presented at the annual Association for Behavioral and Cognitive Therapies conference, New York, NY.
36. Mills, A.C.*, Ayers, K.L.#, Beylotte, F.#, Killeen, T.K., & **Back, S.E.** (October, 2016). Examining the length of imaginal exposures in concurrent treatment for PTSD and substance use disorders. Poster to be presented at the 50th Annual Convention for the Association for Behavioral and Cognitive Therapies, New York, NY.
37. Fischer, M.S., Snead, A.#, **Back, S.E.**, Brady, K.T., Tolliver, B., & Flanagan, J.C.* (October, 2016). Cortisol reactivity in substance abusing couples during conflict: Attenuating effects of intranasal oxytocin. Poster to be presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, New York, NY.
38. Wilkerson, A.K., Lord, J., Sahlem, G.L., Bentzley, B.S., Smith, J.P., Magid, V., **Back, S.E.**, Brady, K.T., & Book, S.W. (August, 2016). Substance Use, Sleep, and Treatment Completion: Preliminary Analyses in an Intensive Outpatient Program for Alcohol and Substance Use Disorders. Presented the annual meeting of the Sleep Research Network, Bethesda, MD.
39. Korte, K.*, Moran Santa Maria, M., Killeen, T., Beylotte, F.# & **Back, S.E.** (August, 2016). Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure: Impact on Suicide. In E. Reiner & B. Sims (Chairs), *Does Integrated Substance Abuse and PTSD Treatment Impact Suicidal behaviors in Veterans?* Presented at the annual American Psychological Association meeting, Denver, CO.
40. Hien, D.A., Ruglass, L.M., Lopez-Castro, T., Papini, S., Killeen, T., & **Back, S.E.** (June, 2016). Concurrent treatment with prolonged exposure for co-occurring PTSD and substance use disorders: A randomized clinical trial. Presented at the annual meeting of the College on

- Problems of Drug Dependence, Palm Springs, CA.
41. Flanagan, J.C.*, Hakes, J.K., McClure, E.A., Snead, A.#, & **Back, S.E.** (June, 2016). Effects of alcohol use, PTSD, and intimate partner violence on cigarette smoking in a nationally representative sample. Presented at the annual meeting of the Research Society on Alcoholism, New Orleans, Louisiana.
 42. **Back, S.E.**, Book, S. & Brady, K.T. (November, 2015). The Drug Abuse Research Training (DART) Program. In Kathleen Hanley (Chair), Building Interprofessional Research and Training in Substance Use workshop presented at the annual meeting of the Association for Medical Education and Research in Substance Abuse, Washington, DC.
 43. Book, S.W., **Back, S.E.**, Bernotski, V.#, Leavitt, V.#, Pelic, C.G., Kantor, E.M., de Arellano, M., & Brady, K.T. (November, 2015). Engaging women and other under-represented MDs in a research career: Results from 10 years of MUSC's Drug Abuse Research Training (DART) Program. Presented at the annual meeting of the Association of American Medical Colleges Group on Women in Medicine and Science, Baltimore, MD.
 44. Mills, K. **Back, S.E.**, Brady, K.T., Baker, A., Claudia, S., Teesson, M. (November, 2015). Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure (COPE). Presented at the annual meeting of the International Society for Traumatic Stress Studies, New Orleans, LA.
 45. Badour, C.L., Flanagan, J.C.*, Killeen, T., & **Back, S.E.** (November, 2015). Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure (COPE): Mediators of symptom change. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Chicago, IL.
 46. Snead, A.L.#, Flanagan, J.C.*, Killeen, T., & **Back, S.E.** (November, 2015). Antisocial personality disorder in Veterans with co-occurring PTSD and substance use disorders. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Chicago, IL.
 47. **Back, S.E.** & Flanagan, J.C.* (June, 2015). Psychological therapies for alcohol use disorders and PTSD. In Steven Batki (Chair), Alcohol Use Disorder and PTSD: From Preclinical Discoveries to Treatment Trials symposium presented at the annual meeting of the Research Society on Alcoholism, San Antonio, TX.
 48. **Back, S.E.** (June, 2015). Treatment of PTSD and substance use disorders: An integrated model using Prolonged Exposure. Presented at the annual meeting of the College on Problems of Drug Dependence, Phoenix, AZ.
 49. Ayers, K.L.#, Koon, K.#, Beylotte, F.#, & **Back, S.E.** (June, 2015). History of trauma associated with post-deployment relationship dysfunction in U.S. military personnel with concurrent PTSD and substance use disorders. Presented at the annual meeting of the College on Problems of Drug Dependence, Phoenix, AZ.
 50. Breedlove, J., **Back, S.E.**, Borckardt, J., Badran, B., Sahlem, G., Rostami, R., Brady, K.T., George, M.S., Hanlon, C.A. (May, 2015). 10 Hz RTMS can reduce pain and craving in prescription opiate dependent individuals. Presented at the annual meeting of the Society of Biological Psychiatry annual meeting, Toronto, Canada.
 51. **Back, S.E.** & Killeen, T. (2014, Nov). Concurrent Treatment of PTSD and Substance Use Disorders using Prolonged Exposure: The COPE treatment. In Sonya Norman (Chair), Treatment for Comorbid PTSD and Substance Use Disorders: Next Steps to Building the Evidence Base symposium presented at the annual meeting of the International Society for Traumatic Stress Studies, Miami, FL.
 52. Flanagan, J.C.*, **Back, S.E.**, & Monson, C.M. (2014, Nov). Examining the effects of oxytocin on subjective and physiological reactivity to dyadic conflict among couples with substance use disorders: The role of gender and posttraumatic stress. Symposium presented at the annual convention of the Association for Behavioral and Cognitive Therapies, Philadelphia,

- Pennsylvania.
53. Flanagan, J.C.*, Snead, A.#, **Back, S.E.**, & Monson, C.M. (2014, Nov). Preliminary feasibility study examining treatment needs of civilian women partners of Veterans with substance use problems. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Philadelphia, Pennsylvania.
 54. **Back, S.E.** (2014, June). Stress and substance use disorders: The role of early life trauma. In John Mantsch (Chair), *Stress and Relapse to Drug Use: From Animal Models to Clinical Trials* symposium presented at the annual meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico.
 55. Flanagan (Hellmuth), J.C.*, McCauley, J.L., Brady, K.T., & **Back, S.E.** (2014, June). Neurobiological and subjective stress reactivity among individuals with prescription opioid dependence: what is the role of interpersonal trauma exposure? Presented at the annual meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico.
 56. **Back, S.E.**, Killeen T., Teer, A.#, Beylotte, F.#, McCauley, J.L., Gros, D., Flanagan (Hellmuth), J.C.*, & Brady, K.T. (June, 2014). Gender differences in trauma and substance use characteristics among Veterans with PTSD and substance use disorders. Presented at the annual meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico.
 57. McCauley, J.L., Mercer, M.A.#, Teer, A.#, Beylotte, F.#, Brady, K.T., & **Back, S.E.** (June, 2014). Gender differences in laboratory stress response among prescription opioid dependent individuals. Presented at the annual meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico.
 58. Teer, A.P.#, Flanagan (Hellmuth), J.C.*, Beylotte, F.#, Killeen, T.K., & **Back, S.E.** (2014, May). Trauma and abuse histories among male veterans with PTSD and co-occurring substance use disorders. Presented at the annual meeting of the American Psychiatric Association, New York, NY.
 59. **Back, S.E.**, Sahlem, G., Teer, A.P.#, Beylotte, F.#, Brady, K.T., & Hanlon, C. (2014, May). Integrated exposure therapy in PTSD/addiction patients is associated with a shift from frontal-striatal to temporal-parietal regulation. Presented at the annual meeting of the American Psychiatric Association, New York, NY.
 60. **Back, S.E.**, McCauley, J.L., Mercer, M.A.#, LaRowe, S., Gros, D.F., & Brady, K.T. (November, 2013). Examination of prescription opioid cue-induced subjective, physiological and neuroendocrine reactivity. Presented at the annual meeting of the Behavioral and Cognitive Therapies Convention, Nashville, TN.
 61. Adams, Z.W., Danielson, C.K., McCauley, J.L., Flanagan (Hellmuth), J.C.*, Killeen, T.K., Hanson, R.F, & **Back, S.E.** (November, 2013). Provider attitudes on treatment of comorbid PTSD and substance use in adolescents. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies Convention, Nashville, TN.
 62. McCauley, J.L., Mercer, M.A.#, Brady, K.T., Barth, K.S.*, & **Back, S.E.** (November, 2013). Pain management perceptions among prescription opioid dependent individuals. Presented at the Association for Behavioral and Cognitive Therapies, Nashville, TN.
 63. Sahlem, G. Uhde, T.W., Strachan. M. **Back, S.E.**, Simpson, A.N. & Ancoli-Israel, S. (2013). Effects of dawn simulation on sleep in first year medical students. Presented at the annual Sleep meeting, Baltimore, MD.
 64. Killeen, T. & **Back, S.E.** (2013). Special considerations in treating comorbid Combat PTSD and SUDs with exposure-based interventions. In Denise Hien (Chair), *State of the Art: Treating Comorbid PTSD and Substance Use Disorders* symposium presented at the annual meeting of the American Psychological Association, Honolulu, HI.
 65. Reid-Quiñones, K., **Back, S.E.**, Killeen, T. Federline, A.B.# & Beylotte, F.# (2012, November). Comorbid PTSD and substance use disorders: Military Veterans' perceptions of symptoms and

- treatment preferences. In Christy Capone (Chair), Treatment of PTSD-SUD in Veterans symposium presented at the annual meeting of the International Society for Traumatic Stress Studies, Los Angeles, CA.
66. Federline, A.B.#, **Back, S.E.**, Killeen, T., Santa Ana, E.J., Beylotte, F.#, & Brady, K.T. (2012, November). Use of an integrated, exposure-based therapy to treat PTSD and comorbid alcohol dependence in an Iraq Veteran. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Baltimore, MD.
 67. Hartwell, E.E.* , Brady, K.T., & **Back, S.E.** (2012, June). Sleep quality and stress reactivity among individuals with prescription opioid dependence. Presented at the annual meeting of the College on Problems of Drug Dependence, Palm Springs, CA.
 68. Hartwell, K.J., McRae-Clark, A.L., **Back, S.E.**, Shaftman, S.R., & Brady, K.T. (2011, December). Motives for using: A comparison of prescription opioid, marijuana and cocaine dependent individuals. Presented at annual meeting of the American Academy of Addiction Psychiatry, Scottsdale, AZ.
 69. **Back, S.E.**, Killeen, T., Brady, K.T., & Foa, E. (2011, November). Integrative treatment of PTSD and substance use disorders among military personnel. In Seth Gillihan (Chair), Novel Treatments for Comorbid PTSD and Substance Use Disorders symposium presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Toronto, Canada.
 70. Zinzow, H., **Back, S.E.**, & Brady, K.T. (2011, November). Distress tolerance and alexithymia as mediators of the relation between life stressors and substance use problems. Presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, Toronto, Canada.
 71. **Back, S.E.** (2011, September). Prolonged exposure for PTSD among military veterans with substance use disorders. In Katherine Mills (Chair), Prolonged Exposure for PTSD among People with Substance Use Disorders symposium presented at the European Association for Behavioural and Cognitive Therapies, Reykjavik, Iceland.
 72. Hartwell, E.E.* , Eaddy, J.#, Singleton, L.#, Brady, K.T., & **Back, S.E.** (2011, August). Development of a drug cue paradigm for prescription opioids. Presented at the annual meeting of the American Psychological Association Washington, DC.
 73. **Back, S.E.**, DeSantis, S.M., Shaftman, S.R., Singleton, L.#, Eaddy, J.#, & Brady, K.T. (2011, June). Reactivity to laboratory-induced stress among individuals with prescription opioid dependence. Presented at the annual meeting of the College on Problems of Drug Dependence, Hollywood, FL.
 74. Hartwell, K., Simpson, A., Friedrich, D., Lewis, R., Thomas, S., McRae-Clark, A., **Back, S.E.**, Brady, K. (2011, June). Smoking rates significantly elevated in drug dependent study populations. Presented at the annual meeting of the College on Problems of Drug Dependence, Hollywood, FL.
 75. Hartwell, E.E.* , **Back, S.E.**, & Brady, K.T. (2011, June). Impaired sleep functioning in prescription-opioid dependent individuals. Presented at the annual meeting of the College on Problems of Drug Dependence, Hollywood, FL.
 76. Barth, K.S.* , **Back, S.E.**, Moran-Santa Maria, M., Shaftman, S., & Brady, K.T. (2011, April). Pain and depression among prescription opioid-dependent individuals. Presented at the National Center for Research Resources meeting, Bethesda, MD.
 77. Mills, K.M., Teesson, M., **Back, S.E.**, Hopwood, S., & Baker, A. (2010, November). Treating PTSD among people with substance use disorders: Findings from a randomised controlled trial of exposure therapy. Presented at the annual meeting of the International Society for Traumatic Stress Studies, Quebec Canada.
 78. **Back, S.E.** (2010, August). Smoking, gender and relapse. In Cora Lee Wetherington and Sudie E. Back (Chairs), Social Stress and Drug Addiction: Sex/Gender Matters symposium presented at the annual meeting of the American Psychological Association, San Diego, CA.

79. **Back, S.E.**, Payne, R.A.*, Simpson, A.N., & Brady, K.T. (2010, June). Predictors of prescription opioid non-medical use, abuse and dependence: Findings from the National Survey on Drug Use and Health. Presented at the annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ.
80. DeSantis, S. **Back, S.E.**, Brady, K. (2010, June). A Zero-Inflated Hidden Markov Model of Cocaine Using Behavior. Presented at the annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ.
81. Lawson, K.M.*, Singleton, L.M.#, Hartwell, E.E.*, Brady, K.T., & **Back, S.E.** (2010, June). Gender differences in motives to use and sources of prescription opioids. Presented at the annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ.
82. Hartwell, E.E.*, Lawson, K.*, Singleton, L.M.#, & **Back, S.E.** (2010, June). Gender differences in presenting characteristics and severity of substance use among individuals with prescription opioid dependence. Presented at the annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ.
83. Cluver, J., **Back, S.E.**, Shaw, D. (2010, June). Into the Great Wide Open: Engaging Students in Research Projects in Psychiatry. Presented at the Association of Directors of Medical Student Education in Psychiatry, Jackson Hole, Wyoming
84. Lawson, K.*, Singleton L.M.#, & **Back, S.E.** (2010, March). Stress reactivity among individuals exposed to trauma, with and without PTSD. Presented at the annual meeting of the Anxiety Disorders Association of America, Baltimore, MD.
85. Brady, K.T., **Back, S.E.**, & Haynes, L. (2009, September). The treatment of co-occurring PTSD and substance use disorders. Workshop presented at the annual meeting of the International Society of Addictive Medicine, Calgary, Canada.
86. Mills, K.L., Barrett, E.*, Farrugia, P., Rosenfeld, J., Merz, S., Teesson, M., Baker, A., Sannibale, C., Hopwood, S, **Back, S.E.**, & Brady, K. (2009, November). Characteristics of clients presenting to treatment for co-occurring substance use and posttraumatic stress disorder. Presented at the Australian Professional Society of Alcohol and Other Drugs, Darwin, Australia.
87. **Back, S.E.** (2009, August). Smoking, gender and relapse. In Cora Lee Wetherington (Chair), Stress, Sex and Smoking: The Differential Role of Stress in Smoking Maintenance and Relapse in Males and Females symposium presented at the annual meeting of the American Psychological Association, Toronto, Canada.
88. **Back, S.E.**, Payne, R.A.*, Brady, K.T., & Stroud, Z. (2009, June). Gender differences in prescription opioid dependence: A pilot study. Presented at the 2009 annual meeting of the College on Problems of Drug Dependence, Reno, Nevada.
89. Payne, R.A.*, **Back, S.E.**, Waldrop, A., & Brady, K.T. (2009, June). Gender differences in the prevalence of prescription opioid use among inpatients with substance use disorders. Presented at the College on Problems of Drug Dependence, Reno, Nevada.
90. Haynes, L., Wahlquist, A., Carter, R., **Back, S.**, Payne, R.A.*, & Hillhouse, M. (2009, June). Gender differences at presentation for treatment-seeking opiate dependence. Presented at the 2009 annual meeting of the College on Problems of Drug Dependence, Reno, Nevada.
91. Hartwell, K., **Back, S.**, DeSantis, S., Saladin, M., McRae-Clark, A., Price, K., Moran-Santa Maria, M., Baker, B., Spratt, E., Kreek, M.J., & Brady, K. (2009, June). Reactivity to laboratory stress provocation predicts relapse to cocaine. Presented at the 2009 annual meeting of the College on Problems of Drug Dependence, Reno, Nevada.
92. Book, S.W., **Back, S.E.**, Santos, A.B., Uhde, T.W., & Brady, K.T. (2009, May) MUSC's Drug Abuse Research Training (DART) program: A model for training addiction physician-scientists. Presented at the annual meeting of the Research Society on Alcoholism, San Diego, California.
93. **Back, S.E.**, Stroud, Z.B., Payne, R.A.*, Waldrop, A.E., Smith, A.R., Reeves, S. & Brady, K.T. (2009, March). The relationship between pain symptomatology and post-traumatic stress

- disorder. Presented at the annual meeting of the World Institute on Pain, New York, NY.
94. Payne, R.A.*, **Back, S.E.**, Waldrop, A.E., & Brady, K.T. (2009, March). Gender differences in chronic pain and prescription opioid use among substance abuse inpatients. Presented at the annual meeting of the World Institute on Pain, New York, NY.
 95. Moran, M.M., McRae, A.L., **Back, S.E.**, DeSantis, S.M., Simpson, A.N., Price, K.L., Spratt, E., & Brady, K.T. (2008, December). Influence of cocaine dependence and early childhood trauma on neuroendocrine responding to pharmacological and psychosocial stress tasks. Presented at the annual meeting of the American College of Neuropsychopharmacology.
 96. **Back, S.E.**, DeSantis, S., Hartwell, K., & Brady, K.T. (2008, December). The relationship between reactivity to laboratory stress provocation and relapse to cocaine. Presented at the annual meeting of the American College of Neuropsychopharmacology.
 97. **Back, S.E.** (2008, November). Clinical characteristics of patients with comorbid addiction and PTSD. Presented at the annual meeting of the International Society of Addiction Medicine, Cape Town, South Africa.
 98. **Back, S.E.**, Waldrop, A.E., Yeatts, S., & Brady, K.T. (2008, June). Early life trauma and enhanced sensitivity to current life stressors among cocaine-dependent individuals. Presented at the annual meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico.
 99. Moran-Santa Maria, M., McRae, A.L., **Back, S.E.**, Waldrop, A. E., DeSantis, S.M., Upadhyaha, H.P., Saladin, M.E., & Brady, K.T., (2008, June). HPA axis responding in cocaine dependent males and females. Presented at the annual meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico.
 100. Payne, R.A.*, **Back, S.E.**, Clyde, S.*, Waldrop, A.E., Smith, A., Reeves, S., & Brady, K.T. (2008, June). Gender differences in prescription opioid use and misuse among chronic pain patients in an outpatient pain management clinic. Presented at the annual meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico.
 101. Mills, K.L., Teesson, M., **Back, S.**, Baker, A., Hopwood, S., Brady, K., Sannibale, C. (June, 2008). Integrated treatment for substance use and PTSD using exposure therapy: Preliminary findings. Presented at the annual meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico.
 102. Payne, R.A.*, **Back, S.E.**, Clyde, S.*, Waldrop, A., & Brady, K (2008, March). Generalized anxiety disorder and risk of prescription opioid misuse among inpatients on a detoxification unit. Presented at the annual meeting of the Anxiety Disorders Association of America.
 103. **Back, S.E.**, Waldrop, A.E., Saladin, M.E., Yeatts, S.D., & Brady, K.T. (2007, December). Reactivity to psychological and pharmacological stress provocation: Effects of gender and cigarette smoking status. Presented at the annual meeting of the American College of Neuropsychopharmacology, Boca Raton, FL.
 104. Barrett, E.*, Merz, S., Rosenfeld, J., Mills, K., Teesson, M., Hopwood, S., **Back, S.E.**, Brady, K., Baker, A., & Sannibale, C. (2007, September). Concurrent treatment of substance use and PTSD with prolonged exposure (COPE): A case example. Presented at the Australian Society for Traumatic Stress Studies, Australia.
 105. Payne, R.A.*, **Back, S.E.**, Waldrop, A.E., & Brady, K.T., (2007, December). Prescription opiate use among male and female inpatients on a detoxification unit: A pilot study. Presented at the annual meeting of the American Academy of Addiction Psychiatry, Coronado, CA.
 106. **Back, S.E.**, Waldrop, A.E., Smith A., Reeves C., Hicks B., Payne R.A.*, & Brady K.T. (2007, June). Correlates and gender differences of chronic pain patients using prescription opiates: A pilot study. In Sudie E. Back, and Peggy Compton (Chairs), Chronic Drugs and Chronic Pain symposium conducted at the annual meeting of the College on Problems of Drug Dependence, Quebec, Canada.
 107. Haynes, L. Herrin, A. Carter R., **Back S.**, Brady K., & Hubbard R. (2007, June). Aftercare

- attendance partially moderated by history of physical abuse and gender. Presented at the annual meeting of the College on Problems of Drug Dependence, Quebec, Canada.
108. Saladin, M. **Back S.E.**, Waldrop A.E., Yeatts S., Verduin, M., Allen, J., Kreek M.J., & Brady K.T. (2007, June). Stress reactivity in response to pharmacologic and psychological laboratory stress tasks: Impact of gender and smoking status. Presented at the annual meeting of the College on Problems of Drug Dependence, Quebec, Canada.
 109. Brady K.T., McRae A., **Back S.E.**, Waldrop A.E., Saladin M. & Yeatts S. (2007, June). Gender differences in response to stress and cues in cocaine-dependent individuals. Presented at the annual meeting of the College on Problems of Drug Dependence, Quebec, Canada.
 110. **Back, S.E.**, Waldrop, A.E., Upadhyaya, H. McRae, A., Saladin, M.E., and Spratt, E. (2006, November). Effects of smoking and gender on physiological, neuroendocrine, and subjective stress responses. Presented at the annual meeting of the International Society for Traumatic Stress Studies, Hollywood, CA.
 111. Waldrop, A.E., **Back, S.E.**, McRae, A., Spratt, E., & Brady, K.T. (2006, November). Long-term relationship of negative life events to cocaine and alcohol dependence. Presented at the annual meeting of the International Society for Traumatic Stress Studies, Hollywood, CA.
 112. Sonne, S.C., Waldrop, A., **Back, S.**, Killeen, T., McRae, A., & Brady, K. (2006, June). Paxil CR versus placebo in the treatment of outpatients with comorbid PTSD and substance dependence. Presented at the annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ
 113. **Back, S.E.**, Brady, K.T., Gentilin, S., Jenkins, L., & Brooks, K. (2006, June). Effects of cognitive-behavioral stress management on stress reactivity in substance-dependent individuals: A pilot study. Presented at the annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ.
 114. Waldrop, A.E., **Back, S.E.**, Brady, K.T., Upadhyaya, H.P., McRae, A.L., & Saladin M. (2006, June). Daily stressor sensitivity, abuse effects, and cocaine use in cocaine dependence: Gender differences. Presented at the annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ.
 115. Verduin, M.L., McRae, A.L., Sarang, R., **Back, S.E.**, Simpson, S., & Brady, K.T. (2006, June). Assessment of club drug use in treatment-seeking individuals with marijuana dependence. Presented at the annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ.
 116. **Back, S.E.**, Brady, K.T., Jaanimägi, U., & Jackson, J. (2005, August). Cocaine dependence and PTSD: Symptom interplay and treatment preferences. Presented at the annual meeting of the American Psychological Association, Washington, DC.
 117. **Back, S.E.**, Jaanimägi, U., Brady, K.T., & Jackson, J. (2005, August). Gender differences in individuals with cocaine dependence and PTSD. Presented at the annual meeting of the American Psychological Association, Washington, DC.
 118. **Back, S.E.**, Brady, K.T., Jackson, J.L., Salstrom, S., & Zinzow, H. (2005, June). Cocaine and stress reactivity: Subjective and physiological gender differences. Presented at the annual meeting of the College on Problems of Drug Dependence, Orlando, FL.
 119. Haynes, L., **Back, S.E.**, Leimberger, J. & Hubbard, R. (2005, June). Improving the transition from residential to outpatient addiction treatment: Gender differences in response to supportive telephone calls. Presented at the annual meeting of the College on Problems of Drug Dependence, Orlando, FL.
 120. Verduin, M.L., **Back, S.E.**, Brady, K.T., McRae, A.L., Waldrop, A.E., Sensenig, A., & Jaanimägi, U. (2005, June). Assessment of drug-taking situations in post-traumatic stress disorder and co-occurring substance dependence. Presented at the annual meeting of the College on Problems of Drug Dependence, Orlando, FL.

121. Sonne, S.C., **Back, S.E.**, Brady, K.T., & Verduin (2005, June). Symptom improvement in co-occurring PTSD and alcohol dependence. Presented at the annual meeting of the annual meeting of the College on Problems of Drug Dependence, Orlando, FL.
122. McRae, A.L., Brady, K.T., **Back, S.E.**, Waldrop, A.E., Upadhyaya, H., Saladin, M.E., & Sensenig, A.E. (2005, June). Subjective stress reactivity before and after cold pressor task in individuals with substance dependence and PTSD. Presented at the annual meeting of the College on Problems of Drug Dependence, Orlando, FL.
123. Rieckmann, T., Keyser-Marcus, L., **Back, S.**, Wong, C., Loeb, P., Allen, T., & Svikis, D. (2005, June). Men and women at work: Success stories of the Job Seekers' Workshop. Presented at the annual meeting of the College on Problems of Drug Dependence, Orlando, FL.
124. **Back, S.E.**, Jackson, J.L., & Brady, K.T. (2004, November). Alcohol dependence and PTSD: Order of onset. In Scott F. Coffey (Chair), PTSD and Substance Dependence: Symptom Covariation, Functional Associations, and Treatment Implications symposium presented at the annual meeting of the Association of Behavior and Cognitive Therapies, New Orleans, LA.
125. **Back, S.E.**, Brady, K.T., McRae, A.L., Randall, C., & Anton, R. (June, 2004). Alcohol dependence and PTSD: Subjective and biological stress reactivity. In Scott F. Coffey and Aimee McRae (Chairs), Trauma, Stress, and Duress. Symposium conducted at the annual meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico.
126. Brady, K.T., Sonne, S.C., Killeen, T., Simpson, K.N., Randall, C., **Back, S.E.**, & Anton, R.F. (2003, June). Sertraline in comorbid PTSD/alcohol dependence. Presented at the annual meeting of the annual meeting of the College on Problems of Drug Dependence, Bal Harbor, FL.
127. Hammons, B., **Back, S.E.**, & Jackson, J.L. (2003, March). Psychological correlates of sexual, physical, and combined child abuse. Presented at the annual meeting of the Southeastern Psychological Association, New Orleans, Louisiana.
128. **Back, S.E.**, McRae, A.L., Brady, K.T., Anton, R.F., Randall, C.L., & Timmerman, M.A. (2002, June). Relationship between stress reactivity and subsequent alcohol use. Presented at the annual meeting of the College on Problems of Drug Dependence, Quebec City, Canada.
129. Shaffer, A., **Back, S.E.**, Fitzgerald, M.M., Jackson, J., & Osman, M.M. (2001, November). Cultural differences in child sexual abuse: Incidence, disclosure, and psychological adjustment in Singapore and the U.S. Presented at the annual meeting of the annual meeting of the Association for the Advancement of Behavior Therapy, Philadelphia, PA.
130. **Back, S.E.**, Brady, K.T., Dansky, B.S., Monnier, J., & Resnick, H. (2001, November). Gender differences in HIV high-risk behaviors among individuals with PTSD and cocaine dependence. Presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Philadelphia, PA.
131. Dansky, B.S., **Back, S.E.**, Brady, K.T., & Gentilin, S. (2001, November). Predicting drop-out before vs. after exposure among individuals with PTSD and cocaine dependence. Presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Philadelphia, PA.
132. **Back, S.E.**, Brady, K.T., & Sonne, S. (2001, June). Gender differences in individuals with comorbid alcohol dependence and posttraumatic stress disorder. Presented at the annual meeting of the College on Problems of Drug Dependence, Scottsdale, AZ.
133. **Back, S.E.**, Jackson, J., Osman, M.M., & Brady, K.T. (2001, March). Substance use and trauma across cultures. Presented at the annual meeting of the annual meeting of the Southeastern Psychological Association, Atlanta, GA.
134. **Back, S.E.**, Brady, K., Dansky, B., Resnick, H., Monnier, J., & Timmons, T. (2000, June). The link between HIV high-risk behaviors and PTSD symptomatology among cocaine-dependent individuals. Presented at the annual meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico.

135. Brady, K., **Back, S.E.**, Sonne, S., Dansky, B., & Diaz-Zuniga, C. (2000, June). Comparative profiles of cocaine-dependent and alcohol-dependent women with PTSD. Presented at the annual meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico.
136. Brewerton, T.D., **Back, S.E.**, Jackson, J., & Osman, M.M. (2000, May). Links between eating disorder pathology and victimization history across cultures. Presented at the annual meeting of the International Conference on Eating Disorders, New York City, New York.
137. **Back, S.E.**, Dansky, B.S., Coffey, S.F., Saladin, M.E., Sonne, S.C., & Brady, K.T. (1999, November). PTSD and cocaine dependence: All traumas are not created equal. Presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Toronto, Canada.
138. Shaffer, A., **Back, S.E.**, & Jackson, J. (1999, November). Child sexual abuse: Changes and trends over the decade. Presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Toronto, Canada.
139. Marx, B.P., **Back, S.E.**, Miranda, R., Meyerson, L., Drabman, R., & Osman, M. (1999, November). The probabilistic thinking questionnaire: A new measure for assessing cognitive styles among adult victims of child sexual abuse. Presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Toronto, Canada.
140. **Back, S.E.**, Felfoldi, D., Jackson, J., Brady, K. T., Osman, M., & Brewerton, T. (1999, November). Body image and alcohol use in the United States and Singapore. Presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Toronto, Canada.
141. **Back, S.E.**, Dansky, B.S., Coffey, S.F., Saladin, M.E., Sonne, S.C., & Brady, K.T. (1999, August). Comorbid posttraumatic stress disorder and cocaine dependence. Presented at the annual meeting of the American Psychological Association, Boston, MA.
142. **Back, S.E.**, Dansky, B.S., Coffey, S.F., Saladin, M.E., Sonne, S.C., & Brady, K.T. (1999, August). Psychiatric comorbidity among cocaine dependent individuals with posttraumatic stress disorder. Presented at the annual meeting of the American Psychological Association, Boston, MA.
143. **Back, S.E.**, Shaffer, A., Jackson, J., & Feingold, A. (1999, March). Perceptions of severity of sexual behaviors: What constitutes abuse? Presented at the annual meeting of the Southeastern Psychological Association, Savannah, GA.
144. Jackson, J., **Back, S.E.**, Shaffer, A., & Feingold, A. (1999, March). Gender differences in attitudes toward child sexual abuse. Presented at the annual meeting of the Southeastern Psychological Association, Savannah, GA.
145. Shaffer, A., Jackson, J., & **Back, S.E.** (1999, March). Relationship of disclosure to labeling of sexual experiences as abuse. Presented at the annual meeting of the Southeastern Psychological Association, Savannah, GA.
146. **Back, S.E.**, & Lips, H.M. (1998, August). Child sexual abuse: Blaming the victim, blaming the parents. Presented at the annual meeting of the American Psychological Association, San Francisco, CA.
147. **Back, S.E.** (1997, May). Cross-cultural attitudes toward child sexual abuse among American and Puerto Rican students. Presented at the annual meeting of the American Psychological Society, Washington, DC.

INVITED PRESENTATIONS AND TRAINING

148. **Back, S.E.** & Killeen, T.K. (July, 2019). Concurrent Treatment of PTSD and Substance Use Disorders. Presented at Emory University, Atlanta, GA.
149. Joseph, J. & **Back, S.E.** (August, 2017). Neuroimaging considerations for tracking brain changes in PTSD/SUD interventions. Presented at the MUSC Center for Biomedical Imaging (CBI)'s Addiction Study Workgroup.
150. **Back, S.E.** (May, 2017). The intersection of PTSD and substance use: Overview and advances in

- treatment. Presented at the annual Addiction Day conference, University of Calgary, Canada.
151. **Back, S.E.** (September, 2016). Doxazosin in the treatment of co-occurring PTSD and alcohol use disorders. Presented at the annual Combat PTSD meeting, San Antonio, TX.
 152. **Back, S.E.** (September, 2016). Glial regulators in the treatment of PTSD and alcohol use disorders. Presented at the annual Substance Abuse Government Steering Committee meeting, Fort Detrick MD.
 153. **Back, S.E.** (May, 2016). Doxazosin for co-occurring PTSD and alcohol use disorder. Presented at the annual Consortium to Alleviate PTSD (CAP) Government Steering Committee meeting, Fort Detrick MD.
 154. **Back, S.E.** (April, 2016). Clinical studies of post-traumatic stress disorder and substance use disorder. Invited talk presented at the annual Frontiers in Neuroscience meeting, Charleston, SC.
 155. **Back, S.E.** (December, 2015). Integrated therapies for comorbid PTSD and substance abuse. Presented at the NIAAA State of the Science meeting on Treating the Comorbidity of Alcohol Use Disorders and PTSD, Hollywood, FL.
 156. **Back, S.E., & Killeen, T.** (September, 2015). Treatment of PTSD and substance use disorder comorbidity. Presentation and two-day training conducted at the University of Vermont, Burlington, VA.
 157. **Back, S.E.** (2015, April). Treatment of co-occurring PTSD and substance use disorders. Grand Rounds presented at McLean Hospital/Harvard Medical School, Cambridge, MA.
 158. **Back, S.E.** (2014, May). PTSD and substance use disorders. Invited Grand Rounds presented at McLean Hospital/Harvard Medical School Addictions conference, Cambridge, MA.
 159. **Back, S.E.** (2014, January). Using Prolonged Exposure therapy to treat PTSD among patients with substance use disorders. Invited talk presented at the Karolinska Institute, Stockholm, Sweden.
 160. **Back, S.E.** (2013, April). PTSD and co-occurring substance use disorders: Advances in treatment. Invited talk given at the Laboratory of Clinical and Translational Studies (LCTS) National Institute on Alcohol Abuse and Alcoholism (NIAAA), Bethesda, MD.
 161. **Back, S.E., Hartwell, E.E., & McCauley, J.L.** (2012, June). Sleep and substance use disorders. Invited talk presented at the annual MUSC Update in Psychiatry meeting, Charleston, SC.
 162. **Back, S.E.,** (2011, July). Lessons learned along the way. Invited talk presented at the National Institute on Drug Abuse's (NIDA) Mentored K Awardees Meeting, Bethesda, MD.
 163. **Back, S.E.,** (2010, June). Prescription opioid dependence: The role of stress and conditioned drug cues. Invited talk presented at the National Drug and Alcohol Research Centre, University of New South Wales, Sydney, Australia.
 164. **Back, S.E.** (2009, February). Gender-related research. Invited talk presented at Radford University, Radford, VA.
 165. **Back, S.E.** (2008, October). Prescription opioid dependence. Presentation conducted at annual meeting of the South Carolina Pain Management Conference, Hilton Head, SC.
 166. **Back, S.E.** (2007, August). Cognitive behavioral therapy for substance use disorders. Presentation conducted as part of the South Carolina Addiction Fellows Program, Charleston, SC.
 167. **Back, S.E.** (2007, February). Comorbidity in the workplace: Treating addiction and comorbid PTSD. Invited talk presented at the annual meeting of The Mental Health Services conference, Sydney, Australia.
 168. **Back, S.E.** (2007, February). Concurrent Treatment with Prolonged Exposure (COPE). Invited talk presented at the National Drug and Alcohol Research Centre, University of New South Wales, Sydney, Australia.
 169. **Back, S.E.** (2006, August). PTSD and substance use disorder comorbidity. Presentation conducted as part of the South Carolina Addiction Fellows Program, Charleston, SC.

170. **Back, S.E.**, & Chellis, A. (2006, July). Job Seekers Workshop: Leader Training. Two-day workshop conducted as part of the South Carolina School on Alcohol and Drug Studies, Greenville, SC.
171. **Back, S.E.** (2001, October). Posttraumatic stress disorder: An overview of prevalence, symptoms, and recovery. Presentation given to the Psi Chi National Honor Society, Department of Psychology, University of Georgia, Athens, GA.

PROFESSIONAL ACTIVITIES

Internal Committees

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| 2019-present | Chair, Data and Safety Monitoring Board (DSMB) for Drs. Kathleen Brady and Constance Guille at MUSC. Project entitled, "Impact of Lofexidine on Stress, Craving and Opioid Use" (U54 DA016511). |
| 2018-2019 | Member, Search Committee for the Chair for the Department of Neuroscience, MUSC. |
| 2018-present | Chair, Data and Safety Monitoring Board (DSMB) for Dr. James Prisciandaro at MUSC. Project entitled, "Gabapentin for Bipolar and Cannabis Use Disorders: Relation to Brain GABA/Glutamate" (R21 DA043917). |
| 2018-present | Chair, Data and Safety Monitoring Board (DSMB) for Dr. Therese Killeen at MUSC. Project entitled, "Mindfulness Meditation for the Treatment of Women with Comorbid PTSD and SUD" (R01 DA040968). |
| 2017-present | Member, Data and Safety Monitoring Board (DSMB) for Dr. Kenneth Ruggerio at MUSC. Project entitled, "Bounce Back Now" (R01 MH107641). |
| 2016-2019 | Member, Research and Development (R&D) Committee, Ralph H. Johnson VAMC, Charleston, SC. |
| 2015-2017 | Member, Psychology Education Committee, Department of Psychiatry & Behavioral Sciences, MUSC. |
| 2015-2017 | Member, Data and Safety Monitoring Board (DSMB) for Dr. Carla Danielson at MUSC. Project entitled, "Risk Reduction through Family Therapy" (R01 DA31285). |
| 2015 | Member, Division Director Search Committee, Department of Psychiatry & Behavioral Sciences, Medical University of South Carolina, Charleston SC. |
| 2014-2015 | Member, Grand Rounds Committee, Department of Psychiatry & Behavioral Sciences, MUSC. |
| 2012-present | Member, NIDA T32 Committee, MUSC. |
| 2011-2013 | Member, Research Committee, Liaison Committee on Medical Education (LCME) accreditation, Medical University of South Carolina, Charleston SC. |
| 2010-2013 | Member, Steering Committee, Women Scholars Initiative, MUSC |
| 2010-2012 | Member, Childcare Issues Workgroup, Women Scholars Initiative, MUSC. |
| 2009-2011 | Member, Appointments, Tenure and Promotion Committee, Department of Psychiatry & Behavioral Sciences, MUSC. |
| 2008-present | Member, Executive Committee on Education and Training Programs, Department of Psychiatry & Behavioral Sciences, MUSC. |
| 2007 | Member, Search Committee for Director of Office of Research and Sponsored Programs, MUSC. |

National Committees

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| 2018-present | Member, Advisory Workgroup, "Data and Policy Analysis Project to Identify Emerging Issues and Trends in Women's Health Across the Lifespan," Office on |
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	Women's Health (OWH).
2018-present	Member, College on Problems of Drug Dependence, Managing Misconduct Workgroup Committee.
2018	Scientific Reviewer, NIDA Special Emphasis Panel, Summer Research Education Experience Programs (R25).
2018	Scientific Reviewer, NURA Merit Review and Career Development Awards, Department of VA.
2018	Scientific Reviewer, NCCIH Natural Product Phase I-IIa Clinical Trial Award.
2017	Scientific Reviewer, NIDA Special Panel, Research Education Program for Clinical Researchers and Clinicians (R25).
2017-present	Member, Advisory Board, TRACC program (Translational Research Training in Addictions for Racial/Ethnic Minorities at the City College of New York and Columbia University Medical Center). PI: Denise Hien.
2017-present	Member, Data and Safety Monitoring Board (DSMB) for Dr. Michele Bedard-Gilligan at the University of Washington. Project entitled, "Marijuana Use, Extinction Learning and Exposure Therapy in Individuals with PTSD" (R34 AA0222966).
2017	Scientific Reviewer, NIH Special Panel, Biobehavioral Applications in Ethology and Substance Abuse.
2016-present	Member, College on Problems of Drug Dependence, Human Research Committee.
2014	Scientific Reviewer, Department of VA, Career Development Award review panel.
2013-present	Member, Australian National Health and Medical Research Council, Centre of Research Excellence (CRE) in Mental Health and Substance Use.
2011-present	Member, Advisory Committee, Harvard/McLean Hospital R25 Research Concentration Program. PI: Shelly Greenfield.
2009	Scientific Reviewer, NIDA/NIH Grant Reviewer, Intramural Research Program of NIDA.
2008-2013	Member, College on Problems of Drug Dependence, Membership Committee.
2006	Member, Program Committee, International Society for Traumatic Stress Studies.
2002-2003	Member, Program Committee, Association of Behavioral and Cognitive Therapies.
2001-2004	Member, Admissions Committee, University of Georgia, Department of Psychology, Athens, GA.
1995-1997	Member, Advisory Board and Planning Committee, Radford University, Center for Gender Studies, Department of Psychology.

EDITORIAL ACTIVITIES

- Invited Guest Editor, *Addictive Behaviors* Issue on Substance Abuse in the Military, 2014.
- Reviewer for:
 - Academic Psychiatry*
 - Addiction*
 - Addiction Research and Theory*
 - Alcoholism: Clinical and Experimental Research (ACER)*
 - American Journal on Addictions*

American Journal of Psychiatry (AJP)
Archives of General Psychiatry
Child Abuse and Neglect: The International Journal
Clinical Psychology Review
Drug and Alcohol Dependence
Experimental and Clinical Psychopharmacology
Expert Opinion on Pharmacotherapy
Harvard Review of Psychiatry
Journal of Studies on Alcohol
Journal of Clinical Psychiatry
Journal of Consulting and Clinical Psychology (JCCP)
Journal of Substance Abuse Treatment (JSAT)
Journal of Traumatic Stress (JTS)
Neuropsychopharmacology
Progress in Neuro-Psychopharmacology and Biological Psychiatry (PNP&BP)
Psychoneuroendocrinology
Psychopharmacology
Psychological Assessment

TEACHING EXPERIENCE

2014-present Supervisor, Department of Psychiatry and Behavioral Sciences, MUSC.
 Supervisor of pre-doctoral psychology interns and post-doctoral fellows.
 2013-2015 Faculty Lead, Grant Writing Course, MUSC.
 2004-2013 Lecturer, Department of Psychiatry & Behavioral Sciences, MUSC on Gender,
 Addiction, Alcohol, Stress, Psychopathology.
 2009 Adjunct Faculty, College of Charleston, Department of Psychology, Charleston,
 SC. Research Methods (PSYC 220).
 1998-2002 Instructor, University of Georgia, Department of Psychology, Athens, GA.

OTHER EXPERIENCE

2019-present Charter Member, Diversity and Inclusion Committee, Mason Preparatory School,
 Charleston, SC
 2018 Volunteer, Panel member following the premiere of, *Three Identical Strangers*,
 Jewish Community Center Filmfest and Terrace Theatre, Charleston, SC.
 2018 Outreach Volunteer, Father Joes Villages as part of the annual CPDD
 conference, San Diego, CA.
 2014 Outreach Volunteer, Banco de Alimentos, Bayamon Puerto Rico as part of the
 annual CPDD conference, San Juan, Puerto Rico.
 2009-2013 Therapy Trainer, City College of New York, NY.
 2004-2006 Lead Node Therapist and Therapy Trainer, NIDA Clinical Trials Network, Job
 Seekers Workshop, Medical University of South Carolina.
 2003-2004 Research Contractor, Center for Disease Control (CDC), Atlanta, GA.