



# DART

DRUG ABUSE RESEARCH TRAINING

## In this Newsletter..

About DART— Faculty & Staff

p. 2

Current DART Residents

p. 3



Select Publications and Presentations

p. 5

Featured Abstracts

p. 6



2018 DART Summer Research Day

p. 8

Summer Poster Presentations

p. 9



DART Alumni Updates

p. 11

Upcoming Conferences and Meetings

p. 12



# DART

The **Drug Abuse Research Training** Program at the Medical University of South Carolina (MUSC) is sponsored by the National Institute on Drug Abuse (R25 DA050237). The mission of this program is to increase the number of physician-scientists with the necessary skills to conduct patient-oriented research. The program accomplishes its goals through a 2-year resident research track, a 10-week summer research fellowship for undergraduate, graduate, and medical students, pilot project funding, didactics, and mentorship. For more information, please visit [www.musc.edu/DART](http://www.musc.edu/DART) or e-mail [DART@musc.edu](mailto:DART@musc.edu).

## Faculty & Staff



### Sudie Back, PhD

Dr. Back, a Professor at MUSC, is principal investigator (PI) and Director of the DART Program. She specializes in post-traumatic stress disorder (PTSD) and substance use disorders (SUD).



### Kathleen Brady, MD, PhD

Dr. Brady is a Distinguished University Professor at MUSC. She is the founder of the DART Program and current Co-PI. Dr. Brady specializes in substance use disorders, PTSD, bipolar disorders, and gender differences.



### Sarah Book, MD

Dr. Book is a Professor at MUSC, board-certified psychiatrist, and Co-Director of the DART Program. Her areas of expertise include anxiety and addiction medicine, as well as alcohol and opioid use disorders.



### Kelly Barth, DO

Dr. Barth, an Associate Professor at MUSC, serves as Co-Director of the DART Program and the Medical Director of the Behavioral Medical Clinic at MUSC. She is a DART alumna, and her current research interests involve chronic pain and opioid use disorders.



### Nicky Thornley, MPH

Ms. Thornley is a DART Program Coordinator and has been working with the DART Program since 2011. She has a Masters in Public Health from Emory University. Ms. Thornley looks forward to facilitating the DART Program's continued growth and success at MUSC.



### Emily Bristol

Ms. Bristol is the newest DART Coordinator, joining the team in 2018. She completed her bachelor's in Psychology and Spanish at Lafayette College, and is a registered yoga teacher. Prior to DART, Ms. Bristol worked on a clinical trial the Addiction Sciences Division.

# Current DART Residents

2018-2019



## Joshua Brown, MD, PhD

Dr. Brown completed his MD and PhD through the Medical Scientist Training Program at the Medical College of Wisconsin in 2014. His dissertation with Nashaat Gerges studied the synaptic plasticity in vitro and its correlation with learning and memory in animal models. He then joined the combined Psychiatry/Neurology residency program at MUSC. Dr. Brown's DART project investigates the mechanisms of transcranial magnetic stimulation (TMS), specifically, the role of NMDA receptor-dependent synaptic plasticity in rTMS after-effects through pharmacologic augmentation and antagonism. Dr. Mark George is his primary mentor. Drs. Leonardo Bonihla, Baron Short, and Gregory Sahlem are his secondary mentors.



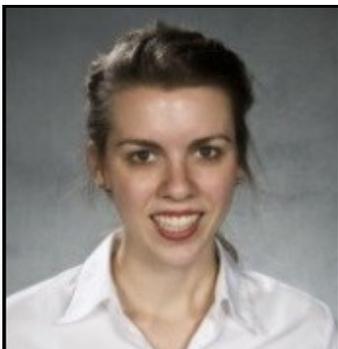
## Ebele Compean, MD

Dr. Compean graduated from the University of Texas Austin with a BA in Plan II Honors, focusing on Arts and Science. She completed her MD at the University of Texas Health Science Center in San Antonio in May 2015 with a Distinction in Education for creating a study framework for struggling first-year medical students. In her DART project, Dr. Compean is investigating the role of neuropeptide-Y and genetics in a randomized placebo controlled study with patients with PTSD and comorbid alcohol use disorder treated with N-acetylcysteine (NAC). Drs. Mark Hamner and Zhewu Wang are her primary mentors.



## David Friedrich, MD

Dr. Friedrich graduated *cum laude* from Cornell University with a bachelor's degree in Biological Engineering. He completed his MD at MUSC, where he was selected for the Alpha Omega Alpha Medical Honor Society. Dr. Friedrich's current DART project is enrolling participants in a randomized, sham-controlled pilot trial using an accelerated course or repetitive transcranial magnetic stimulation (rTMS) to reduce craving for cigarettes. Drs. Greg Sahlem and Baron Short are his primary mentors.



## Sarah Oros, MD

Dr. Oros earned her bachelor of science in Premedicine at University of Dayton, Ohio, and completed her MD at the Boonshoft School of Medicine at Wright State University. She is in the combined Internal Medicine/Psychiatry residency program at MUSC. For her DART project, Dr. Oros is examining the attitudes of primary care providers toward medication assisted treatment for opioid use disorder. She is interested in collaborative care, outpatient medicine, women's health, and geriatrics. Drs. Robert Malcolm and Kelly Barth are her primary mentors.



## Michael Capata, MD

Dr. Capata graduated from the University of California, Davis with a bachelor's in Biological Sciences and then spent three years researching spectrum disorders. He completed his MD at the University of Vermont College of Medicine. For his DART project, Dr. Capata is developing a survey to send to buprenorphine providers in South Carolina to evaluate if they are asking patients about fentanyl exposure and testing for fentanyl. He is also investigating ways to get patients who are using fentanyl into appropriate treatment. Dr. Karen Hartwell is his primary mentor.



## Matthew Fadus, MD

Dr. Fadus received his bachelor's degree in Biology from Saint Joseph's University and completed his MD at Creighton University in Omaha. He finished his pediatric internship at the Children's Hospital of Philadelphia and then joined MUSC's Psychiatry Residency. He plans to research racial disparities among mental health diagnoses as well as examine relationships between screen time (ipad, phones, TV, video games, etc.) and mental health for his DART project. Dr. Lindsay Squeglia is his primary mentor, and they will be using the national Adolescent Brain Cognitive Development (ABCD) study database.

## Wins!

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Dr. Friedrich was appointed Chief Psychiatry Resident at MUSC.

Dr. Oros is the Co-Chief Resident for the Medicine-Psychiatry Program at MUSC.

Dr. Fadus was awarded a *Child and Adolescent Psychiatry Fellowship* from the American Psychiatric Association.

Dr. Fadus received the Scholars of Humanities and Arts Research and Education Grant (SHARE) and a travel award from the American Academy of Child and Adolescent Psychiatry (AACAP).

Dr. Compean received travel awards from the American Psychiatric Association, Society of Biological Psychiatry, and South Carolina Medical Association (SCMA).

Dr. Compean won 2<sup>nd</sup> place for her poster presentation at the 2018 SCMA Annual Meeting.

## Community Involvement

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Dr. Fadus participates in the [Medical Student Psychiatry Longitudinal Clinic](#), as well as the [MUSC LGBT Education](#) course training. He is also a part of the [MUSC Night Shift Buddy System](#), helping first-year residents transition to night shift roles.

Dr. Compean is a creator and instructor of the [MUSC Medical Student Education: Note-writing and Handoff Series](#). She is a chair for the [Resident and Fellow Section of the SCMA](#). Dr. Compean also served as a preceptor for the [Stimulation Center Workshop on Delirium](#) for 13 iterations.

Dr. Friedrich instructed in the [Intern Lecture Series: Documenting the Psychotic Interview](#) and was a preceptor and evaluator for the 2018 [Medical Student Psychiatry OSCE](#).

Dr. Oros is a [physician volunteer for CARES](#), Community Aid Relief Education Support, a clinic providing free care to uninsured adults in Charleston.



# Select Publications

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- Badran, B.W., **Brown J.C.**, **Dowdle, L.T.**, Mithoefer, O.J., LaBate, N.T., Coatsworth, J., DeVries, W.H., **Austelle, C.W.**, McTeague, L.M., Yu A., Bikson M., Jenkins D.D., & George M.S. (2018). Tragus or cymba concha? Investigating the anatomical foundation of transcutaneous auricular vagus nerve stimulation (taVNS). *Brain Stimulation*, 11(4), 947-948.
- Badran, B.W., **Dowdle, L.T.**, Mithoefer, O.J., LaBate, N.T., Coatsworth, J., **Brown, J.C.**, DeVries, W.H., **Austelle, C.W.**, McTeague, L.M., & George, M.S. (2018). Neurophysiologic effects of transcutaneous auricular vagus nerve stimulation (taVNS) via electrical stimulation of the tragus: A concurrent taVNS/fMRI study and review. *Brain Stimulation*, 11(3), 492-500.
- Brown, J.C.**, Higgins, E.S., & George, M.S. (2019). Online question bank (eBook material) accompanying *The Neuroscience of Clinical Psychiatry; The Pathophysiology of Behavior and Mental Illness*, 3<sup>rd</sup> edition. Wolters Kluwer publishers.
- Brown, J.C.\***, Petersen, A. \*, Zhong L., Himelright, M.L., Murphy, J.A., Walikonis R.S., & Gerges N.Z. (2016). Bi-directional regulation of synaptic transmission by BRAG1/IQSEC2 and its requirement in long-term depression. *Nature Communications*. 24(7), 11080. \*Equal contribution.
- Capata, M.**, Angkustsiri, K., Plumer, L., Van de Water, J., & Hansen, R.L. (2012). Subpopulation of children who are not obtaining their 4-6 year booster immunizations. [E-Letter], *Pediatrics*.
- Compean, E.** (2018). A literature review of human studies on neuropeptide Y (NPY) in Posttraumatic Stress Disorder (PTSD) or substance use disorder (SUD). *Biological Psychiatry*, 83(9, Supplement), S246.
- Compean, E.**, & Hamner, M. (2018). Posttraumatic Stress Disorder with secondary psychotic features (PTSD-SP): Diagnostic and treatment challenges. *Progress in Neuro-psychopharmacology & Biological Psychiatry, Special Issues*. 88, 265-275.
- Fadus, M.** (2018). Duck Syndrome, Social Media, and Struggling Together. *Psychiatric News: Residents' Forum*.
- Fadus, M.** (2018). Preparing for a Sequel: '13 Reasons Why' and Suicide Contagion. *Psychiatric News: Residents' Forum*.
- Fadus, M.** (2018). Ethical implications for abilify: MyCite. *Journal of Ethics in Mental Health*.
- Petersen, A., **Brown, J. C.**, & Gerges, N. Z. (2018). BRAG1/IQSEC2 as a regulator of small GTPase-dependent trafficking. *Small GTPases*, 24, 1-7.

# Select Presentations

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- Compean, E.** (April, 2018) An integrative review of clinical studies on neuropeptide-Y in PTSD and substance use disorders. South Carolina Medical Association annual meeting in Greenville, SC.
- Compean, E.**, Hamner, M., Wang, Z., & Back, S. (May, 2018) Neuropeptide-Y (NPY) and NPY genetics in Posttraumatic Stress Disorder (PTSD) with comorbid substance use disorder (SUD) treated with N-acetylcysteine (NAC): Trial design. American Psychiatric Association Annual Meeting. New York City, New York.
- Friedrich, D.**, **Walker, J.**, Korte, J., Whig, S., & Hartwell, K. (June, 2018) Utilization of Smoking Cessation Interventions During VA Medical Center Initial Visit. College on Problems of Drug Dependence Annual Meeting. San Diego, California.

# Featured Abstracts

## Posttraumatic stress disorder with secondary psychotic features (PTSD-SP): Diagnostic and treatment challenges.

**Ebele Compean, MD,** & Mark Hamner, MD

Original article published in *Progress in Neuropsychopharmacology and Biological Psychiatry*, Volume 88, 10 January, 2018, Pages 265-275.



Trauma exposure may lead to various psychiatric disorders including depression, anxiety, bipolar disorders, personality disorders, psychotic disorders, and trauma related disorders, especially posttraumatic stress disorder (PTSD). There are some overlapping symptoms of both PTSD and psychosis that make diagnosis challenging. Despite this overlap, the evidence of PTSD with comorbid psychosis as a distinct entity lies in the research showing biologic, genetic and treatment management differences between psychotic PTSD, non-psychotic PTSD, psychotic disorders and healthy controls. There is emerging evidence that PTSD with secondary psychotic features (PTSD-SP) might be a discrete entity of PTSD with known risk factors that increase its prevalence. This review has presented evidence for individuals with PTSD-SP being distinct in genetics and neurobiological factors. Individuals with PTSD and comorbid psychosis can benefit from evidence based psychotherapy (EBT). There is not enough evidence to recommend second generation antipsychotics (SGA) for PTSD-SP given that risperidone and quetiapine are the only SGAs studied in randomized controlled trials. Hence, developing an operational diagnostic criteria and treatment framework for clinical and research use is critical.

## Attenuation of antidepressant effects of ketamine by opioid receptor antagonism

**Nolan R. Williams, MD,** Boris D. Heifets, MD, PhD, Christine Blasey, PhD, Keith Sudheimer, PhD, Jaspreet Pannu, BS, Heather Pankow, BS, Jessical Hawkins, BS, Justin Birnbaum, MD, David M. Lyons, PhD, Carolyn I. Rodriguez, MD, PhD, & Alan F. Schatzberg, MD.



Original article published online in *The American Journal of Psychiatry*, September 2018.

**Objective:** In addition to N-methyl-d-aspartate receptor antagonism, ketamine produces opioid system activation. The objective of this study was to determine whether opioid receptor antagonism prior to administration of intravenous ketamine attenuates its acute antidepressant or dissociative effects. **Method:** In a proposed double-blind crossover study of 30 adults with treatment-resistant depression, the authors performed a planned interim analysis after studying 14 participants, 12 of whom completed both conditions in randomized order: placebo or 50 mg of naltrexone preceding intravenous infusion of 0.5 mg/kg of ketamine. Response was defined as a reduction  $\geq 50\%$  in score on the 17-item Hamilton Depression Rating Scale (HAM-D) score on postinfusion day 1. **Results:** In the interim analysis, seven of 12 adults with treatment-resistant depression met the response criterion during the ketamine plus placebo condition. Reductions in 6-item and 17-item HAM-D scores among participants in the ketamine plus naltrexone condition were significantly lower than those of participants in the ketamine plus placebo condition on postinfusion days 1 and 3. Secondary analysis of all participants who completed the placebo and naltrexone conditions, regardless of the robustness of response to ketamine, showed similar results. There were no differences in ketamine-induced dissociation between conditions. Because naltrexone dramatically blocked the antidepressant but not the dissociative effects of ketamine, the trial was halted at the interim analysis. **Conclusions:** The findings suggest that ketamine's acute antidepressant effect requires opioid system activation. The dissociative effects of ketamine are not mediated by the opioid system, and they do not appear sufficient without the opioid effect to produce the acute antidepressant effects of ketamine in adults with treatment-resistant depression.

**Dr. Nolan Williams** is a DART resident alumni and was the keynote speaker for the DART Summer Research Day.



# Fall Didactics

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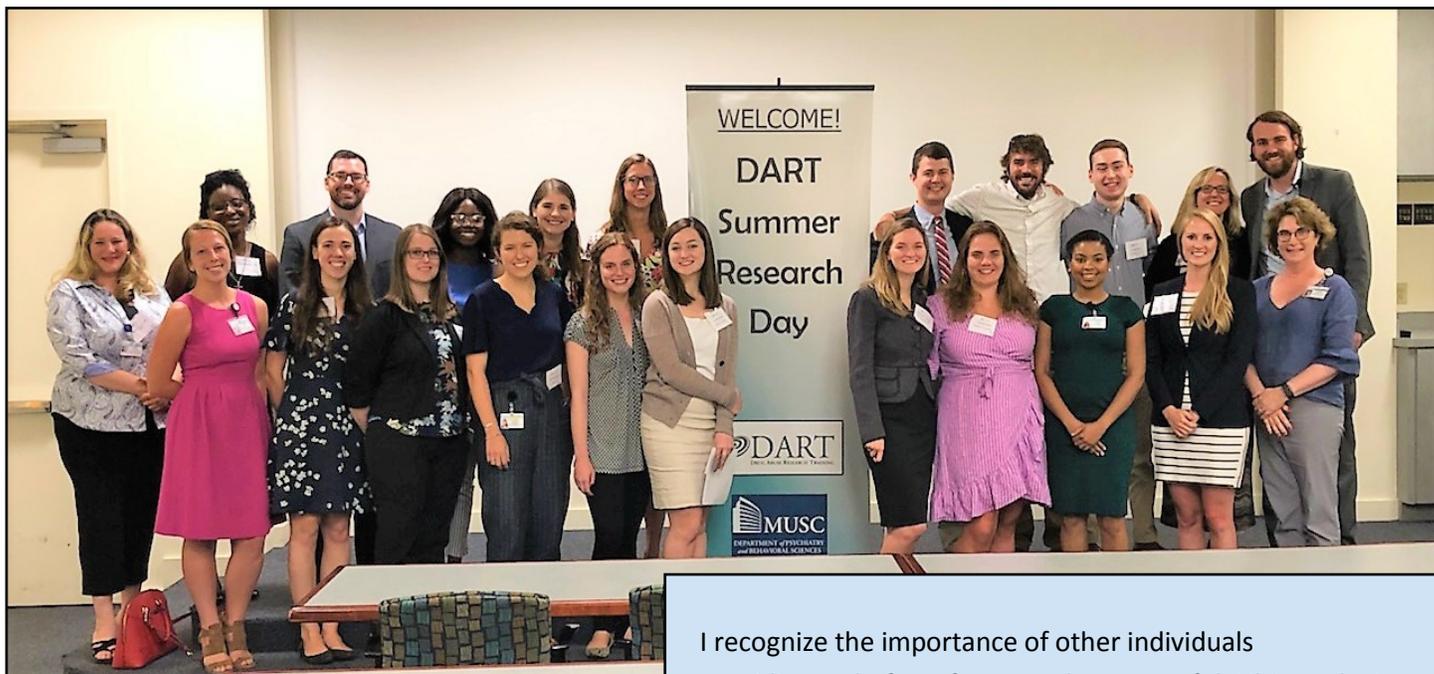
**DART Fall seminars take place in the Psychiatry Resident Education Center (REC) conference room on Tuesdays from 9:00AM to 10:00AM.**

<b>August 28, 2018</b>	Orientation—DART Residents, Faculty and Staff
<b>September 4, 2018</b>	“Working with the IRB” - Ms. Leslie Bell
<b>September 11, 2018</b>	“REDCap” – Ms. Tami Crawford
<b>September 18, 2018</b>	“Putting the Rubber to the Road: Turning an idea into a line of research.”- Dr. Gregory Sahlem
<b>September 25, 2018</b>	“Good Clinical Practices and Research Ethics” - Dr. Susan Sonne
<b>October 2, 2018</b>	"Managing Research and Support Staff" - Dr. Lindsay Squeglia
<b>October 9, 2018</b>	“Success Center and Budget Planning”- Mr. Stephen Skelton
<b>October 16, 2018</b>	“Endnote” - Ms. Teri Lynn Herbert
<b>October 23, 2018</b>	“Statistics “- Dr. Jeffrey Korte
<b>October 30, 2018</b>	“Adverse Events vs Serious Adverse Events” Mr. Cullen McWhite
<b>November 6, 2018</b>	“Poster Presentations” – Dr. Jenna McCauley
<b>November 13, 2018</b>	Visiting researcher Dr. Jonathan Buchholz presenting on opioid use disorder (9 am-10 am)
<b>November 13, 2018</b>	“Publishing” – Dr. Peter Miller (10 am-11 am)
<b>November 20, 2018</b>	No Seminar - Thanksgiving Break
<b>November 27, 2018</b>	“Research Naïve Settings” – Dr. Therese Killeen
<b>December 4, 2018</b>	“DART Resident Research” - Drs. Capata & Fadus
<b>December 11, 2018</b>	“DART Resident Research” - Drs. Friedrich & Oros
<b>December 18, 2018</b>	“DART Resident Research” - Drs. Compean & Brown

Those interested in attending a didactic seminar should contact DART Coordinators at [DART@muscc.edu](mailto:DART@muscc.edu).



# DART Summer Research Day



As another summer comes to a close, we say goodbye to the 2018 Summer Fellows. This year's class included students from South Carolina, Texas, Kentucky, West Virginia, and New York.

I recognize the importance of other individuals providing a platform for me to be successful. Ultimately, I experienced a great deal of growth this summer, and the knowledge that I gained was invaluable.

-2018 DART Summer Fellow

During the 10-week training, students attended didactic seminars and information sessions. Researchers at MUSC provided mentorship in their area of interest and served as guides for the fellows. Students worked individually with their mentors to conduct a research project, analyze data, submit an abstract, and present a poster at the annual **DART Summer Research Day**. Photos and a list of the presentations, students, and mentors are in this newsletter (p. 9-10).

DART invited Nolan Williams, MD, 2014 DART Resident alumnus, as this year's Keynote Speaker. Dr. Williams is currently an Instructor of Psychiatry and Behavioral Sciences at Stanford University and the Director of the Stanford Brain Stimulation Laboratory. He presented his research on the benefits of transcranial magnetic stimulation (TMS), effects of ketamine, and novel treatment options for treatment resistant depression.

**We will be accepting applications for the 2019 DART Summer Research Fellowship starting November 1, 2018. To apply or to learn more, please visit our website [www.musc.edu/DART](http://www.musc.edu/DART).**



# 2018 Poster Presentations

## Understanding the functional role of the Arc using knockdown strategies in rat self-administration

Presented by Gabriella Barry || Mentored by Christopher Cowan, PhD

## Elevated brain responses to pain in individuals using prescription opiates

Presented by Logan T. Dowdle || Mentored by Colleen A. Hanlon, PhD

## Interpersonal trauma and stress processing in youth

Presented by Elizabeth Evans || Mentored by Carla Danielson, PhD & Casey Calhoun, PhD

## Sexual assault during college: The role of drinking motives and Sexual assault history

Presented by Caroline Fields || Mentored by Amanda Gilmore, PhD

## What's in a word?: Linguistic traits of prolonged exposure processing in the treatment of posttraumatic stress disorder and substance use disorders

Presented by Sean Kamperman on behalf of Erin Gandelman || Mentored by Sudie E. Back PhD

## Differences in gestational age at birth and delivery type in women with and without a history of depression

Presented by Carlisle Hiott || Mentored by Bernadette Cortese, PhD, & Connie Guille, MD

## The effects of gender and oxytocin on smoking behavior following a social stress and laboratory relapse paradigm

Presented by Caitlyn O. Hood || Mentored by Erin A. McClure, PhD, & Rachel L. Tomko, PhD

## Developing a novel bipedal device and paradigm to investigate the neural circuits involved in lower extremity movement

Presented by John J. McLeod || Mentored by Colleen A. Hanlon, PhD

## The role of education aspiration-expectation gaps in the association between school interracial climate and student risky behavior

Presented by Jessica Norton || Mentored by Colleen Halliday-Boykins, PhD





**PrEP instead of condoms? A new HIV prevention alternative perceived to restore sexual intimacy for serodiscordant couples**

Presented by Kaosisochukwu Onochie || Mentored by Virginia Fonner, PhD, MPH

**Is cannabis use age of onset associate with problematic cannabis use?**

Presented by Jacqueline Phillips || Mentored by Lindsay Squeglia, PhD

**Emotion regulation and dyadic adjustment in couples with substance use disorder**

Presented by Leanna Poole || Mentored by Julianne Flanagan, PhD

**Associations of neuropeptide-Y (NPY) gene polymorphism with substance use: A systematic review and meta-analysis**

Presented by Victoria E. Ragland || Mentored by Mark Hamner, MD

**Treatment outcomes of buprenorphine maintenance therapy in opioid-dependent patients with comorbid dependence on other substances compared with those with opioid dependence alone: A retrospective chart review**

Presented by Amanda Robinson, MD || Mentored by Bryan K. Tolliver, MD, PhD

**Characterizing the effect of predator odor exposure in C57BL/6J mice**

Presented by India Robinson || Mentored by Marcelo Lopez, PhD

**Development of a preprocessing and intra-individual analysis pipeline for functional neuroimaging data in the study of bipolar disorder and alcohol dependence**

Presented by Justin Sindoni || Mentored by James Prisciandaro, PhD

**Delay discounting over time in current smokers amidst a smoking cessation attempt**

Presented by Jonathan J.K. Stoltman || Mentored by Bryan Heckman, PhD

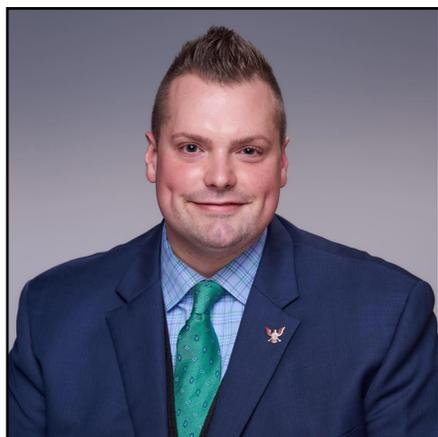
**Relationship between perceived social support and outcome in concurrent treatment of PTSD and substance use disorders using prolonged exposure**

Presented by Serena Walker || Mentored by Elizabeth Santa Ana, PhD



# DART Alumni Updates

**'17 Jennifer Jones, MD**, 2017 DART Resident, completed her residency training in internal medicine and psychiatry and accepted a NIDA T32 post-doctoral fellowship position with MUSC. She has subsequently worked with her primary research mentor and DART Director Sudie Back, PhD, on several randomized controlled trials evaluating the effects of glutamatergic modulators on symptoms of PTSD and substance use disorders. Dr. Jones will be working on a project this fall to evaluate the effects of ketamine, a unique glutamatergic modulator, on treatment outcomes in comorbid opioid use disorder and depression. Recently, she received the National Institute of Health's Loan Repayment Award.



**'16 E. Thomas Lewis III, MD**, 2016 DART Resident, recently accepted a position as MUSC's Inpatient Attending on the Addictions Unit at the Institute of Psychiatry, and was appointed the Associate Director of the Forensic Psychiatry Fellowship. He is the elected Vice President of the South Carolina Psychiatric Association, and continues to serve as the South Carolina representative to the Assembly for the American Psychiatric Association. Dr. Lewis is an active lecturer for the DART didactic series. He is working with Dr. Gregg Dwyer on a grant funded collaboration to investigate substance use among sexual offenders. Dr. Lewis is also co-chair of the research committee with Dr. Kevin Gray for the American Academy of Addiction Psychiatry (AAAP) and will be presenting with him at this year's meeting on Understanding the Medical Literature.



**'17 Jason Tran**, 2017 DART Summer Fellow, is an MD candidate at the University of California, Riverside (UCR). He presented his DART Poster, *Self-Reported Life Problems Associated with Cannabis Use Among Adults Enrolled in Cannabis Use Disorder Pharmacotherapy Trial*, at the Psych Congress in New Orleans, LA in October 2017. He continues to investigate social disparities in education and healthcare for underserved populations through ongoing research at UCR, participation in the Hazelden Betty Ford Foundation Summer Program, and representing UCR at the LGBTQ+ SoCal Health Conference.





# Recent Alumni Publications

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- Back, S.E., & Jones, J.L. (2018). Alcohol use disorder and posttraumatic stress disorder: An introduction. *Alcoholism: Clinical and Experimental Research*, 42(5), 836-840.
- Baker, N.L., Gray, K.M., Sherman, B.J., Morella, K., **Sahlem, G.L.**, Wagner, A.M., & McRae-Clark, A.L. (2018). Biological correlates of self-reported new and continued abstinence in cannabis cessation treatment clinical trials. *Drug and Alcohol Dependence*, 187, 270-277.
- Bowen, L.L.**, & McRae-Clark, A.L. (2018). Therapeutic benefit of smoked cannabis in randomized placebo-controlled studies. *Pharmacotherapy*, 38(1), 80-85.
- Fryml, L., Fox, J., Manett, A.J., Sahlem, G., & Short, E.B.** (2018). Neurogenic pulmonary edema complicating ECT. *J ECT*, 34(2), 78.
- Fryml, L.D.**, Pelic, C.G., Acierno, R., Tuerk, P., Yoder, M., Borckardt, J.J., Juneja, N., Schmidt, M., Beaver, K.L., & George, M.S. (2018). Exposure therapy and simultaneous repetitive transcranial magnetic stimulation: A controlled pilot trial for the treatment of posttraumatic stress disorder. *J ECT*. *Epub available*.
- Fryml, L.D., Sahlem, G., Fox, J., & Short, E.B.** (2018). The role of rTMS for patients with severe PTSD and depression. *Evidence Based Mental Health*, 21(1), 39-40.
- Jones, J.L.**, Matillo, 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).
- Larson, M.J., Browne, C., Nikitin, R.V., Wooten, N.R., Ball, S., Adams, R.S., & **Barth, K.** (2018). Physicians report adopting safer opioid prescribing behaviors after academic detailing intervention. *Substance Abuse*, 1-7.
- Sahlem, G.L.**, Baker, N.L., George, M.S., Malcolm, R.J., & McRae-Clark, A.L. (2018). Repetitive transcranial magnetic stimulation (rTMS) administration to heavy cannabis users. *American Journal of Drug and Alcohol Abuse*, 44(1), 47-55.
- Tomko, R. L., **Jones, J.L.**, Gilmore, A. K., Brady, K.T., Back, S.E., & Gray, K.M. (2018). N-acetylcysteine as a potential treatment for substance use disorders: A review and update. *Current Psychiatry*. 17(6), 30-36, 41-42, 55.
- Williams, N.R.**, Bentzley, B.S., Hopkins, T., Pannu, J., **Sahlem, G.L.**, Takacs, I., George, M.S., Nahas, Z., & Short, E.B. (2018). Optimization of epidural cortical stimulation for treatment-resistant depression. *Brain Stimulation*, 11(1), 239-240.
- Williams, N.R.**, Sudheimer, K.D., Bentzley, B.S., Pannu, J., Stimpson, K.H., Duvio, D., Cherian, K., Hawkins, J., Scherrer, K.H., Vyssocki, B., Desouza, D., Raj, K.S., Keller, J., & Schatzberg, A. F. (2018). High-dose spaced theta-burst TMS as a rapid-acting antidepressant in highly refractory depression. *Brain*, 141(3), e18.

## Wins!

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**E. Thomas Lewis, III, MD**, won MUSC's 2018 Department Award for Outstanding Medical Student Didactic Teaching by a Resident.

**Joseph C. Cheng, MD, PhD**, was awarded MUSC's 2018 J.J. Cleckley Resident Clinical Excellence Award.

**Gregory Sahlem, MD**, won MUSC's 2018 Department Award for PGY2 Outstanding Didactic Teacher of the Year.

**Bryan K. Tolliver, MD**, was awarded the PGY 2 Clinical Teacher of the Year.

**Kelly Holes-Lewis, MD**, won MUSC's 2018 Department Award for PGY 3 Outstanding Outpatient IOP Clinical Teacher.

**Joseph C. Cheng, MD, PhD**, won Phillip J. Resnick Scholar award for the Midwest Chapter of the American Academy of Psychiatry and the Law.

**Nolan Williams, MD**, was our Keynote Speaker for the DART Summer Research Day. He also won a Domestic travel Fellowship Award from the Society of Biological Psychiatry.

**Leah Fryml, MD**, won 2nd place for the Resident Poster Competition at the 2018 South Carolina Psychiatric Association Annual Meeting.

# Upcoming Conferences & Meetings

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## **The 53<sup>rd</sup> Perry V. Halushka 2018 Research Day**

November 2, 2018, Medical University of South  
Carolina, Charleston, South Carolina

[http://academicdepartments.musc.edu/grad/  
students/curr\\_students/research\\_day/](http://academicdepartments.musc.edu/grad/students/curr_students/research_day/)

## **American Academy of Addiction Psychiatry**

29<sup>th</sup> Annual AAAP Meeting

December 6-9, 2018, Bonita Springs, Florida

<http://www.aaap.org/annual-meeting>

## **American College of Neuropsychopharmacology**

57<sup>th</sup> Annual Meeting

December 9-13, 2018, Hollywood, Florida

<http://acnp.org/annual-meeting/>

## **American Association for the Advancement of Science**

2019 Annual Meeting

February 15-19, 2019, Austin, Texas

<http://meetings.aaas.org/>

## **Society for Research on Nicotine and Tobacco**

25<sup>th</sup> Annual Meeting

February 20-23, 2019, San Francisco, California

[https://www.srnt.org/?page=2019\\_meeting](https://www.srnt.org/?page=2019_meeting)

## **American Society of Addiction Medicine**

50<sup>th</sup> Annual Conference-Innovations in Addiction  
Medicine and Science

April 4-7, 2019, Orlando, FL

[http://www.asam.org/education/live-online-cme/  
the-asam-annual-conference](http://www.asam.org/education/live-online-cme/the-asam-annual-conference)

## **Society of Biological Psychiatry**

74<sup>th</sup> Annual Meeting

May 16-18, 2019, Chicago IL

<https://sobp.org/meetings/2019-annual-meeting/>

## **American Psychiatric Association**

172<sup>nd</sup> Annual Meeting

May 18-22, 2019, San Francisco, CA

[https://www.psychiatry.org/psychiatrists/meetings/  
annual-meeting](https://www.psychiatry.org/psychiatrists/meetings/annual-meeting)

## **The College on Problems of Drug Dependence**

81<sup>st</sup> Annual Meeting

June 15-20, 2019, San Antonio, TX

<https://cpdd.org/meetings/future-meeting-sites/>

## **Research Society on Alcoholism**

42<sup>nd</sup> Annual Scientific Meeting

June 22-26, 2019, Minneapolis, Minnesota

<http://www.rsoa.org/2019meeting>

**Travel Awards Available!**

# Additional Information

## Loan Repayment Program (LRP)

The Clinical Research Loan Repayment Program is a vital component of our nation's efforts to attract health professionals to careers in clinical research. In exchange for a two-year commitment to clinical research, NIH will repay up to \$35,000 per year of qualified educational debt, pay an additional 39% of the repayments to cover Federal taxes, and may reimburse state taxes that result from these payments. To participate, you must conduct clinical research for 50% or more of your total effort (average at least 20 hours per week) during each quarterly service period. The research must be funded by a domestic nonprofit or U.S. Government (Federal, state or local) entity.

Examples of DART alumnae who completed the LRP are **Drs. Kelly Barth, Bryan Tolliver, & Jennifer Jones**.  
For more information, please visit <http://www.lrp.nih.gov>



**National Institutes of Health**

**For more information or to apply for the  
DART Program, visit our website**

**[www.musc.edu/dart](http://www.musc.edu/dart)**

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