

SPRING 2020

THE DART NEWSLETTER

Updates from the Drug Abuse Research Training Program at
the Medical University of South Carolina (R25 DA020537)



RESIDENT
RESEARCH
TRACK

FLEX
RESEARCH
ELECTIVE

SUMMER
FELLOWSHIP

ALUMNI

For more information, visit
medicine.musc.edu/DART

Bridging the Gap for Future Researchers

15 Years of the Drug Abuse Research Training Program at MUSC

The Drug Abuse Research Training Program at the Medical University of South Carolina (MUSC) is sponsored by the National Institute on Drug Abuse (NIDA, R25 DA020537).

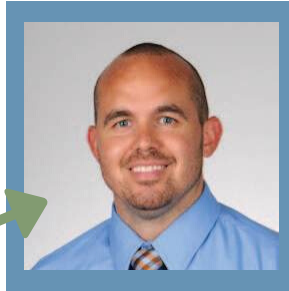
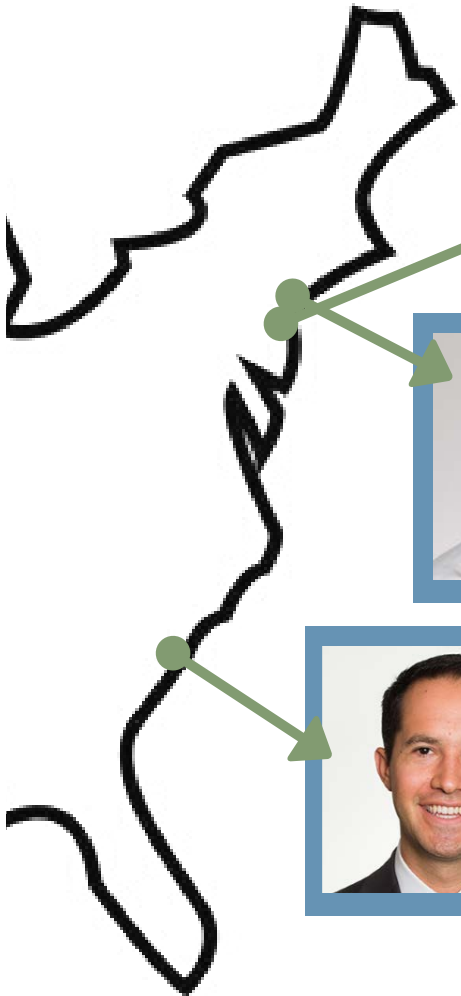
The mission of this program is to increase the number of physician-scientists with the necessary skills to conduct patient-oriented research and to promote research training. The program accomplishes its goals through a 2-year resident research track, a 10-week summer research fellowship for undergraduate, graduate, and medical students, pilot project funding, didactic seminars, and individual mentorship.

The DART Program was founded in 2006 by Kathleen Brady, M.D., Ph.D. and is directed by Sudie Back, Ph.D., Sarah Book, M.D., and Kelly Barth, D.O.

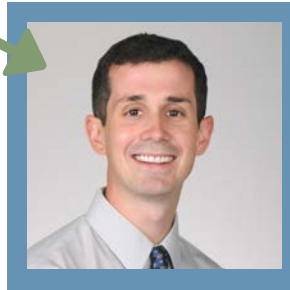
Resident Research Track

GRADUATES

Best of luck to our graduates, Drs. Joshua Brown, Matthew Fadus & Michael Capata!



Joshua C. Brown, M.D., Ph.D. will be joining the faculty as an Assistant Professor in the Research Scholar Track in the Department of Psychiatry & Department of Neurology at Brown University in Providence, Rhode Island.



Matthew Fadus, M.D. will begin the Child and Adolescent Psychiatry Fellowship at Massachusetts General Hospital in Boston.



Michael Capata, M.D. will start the Addiction Fellowship at the Medical University of South Carolina in Charleston.

ABOUT THE RESIDENT RESEARCH TRACK

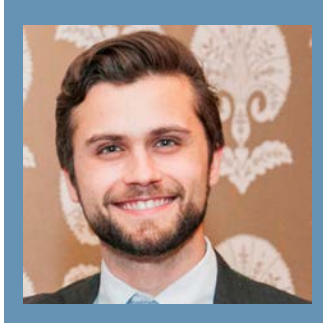
The DART Program offers a NIDA-sponsored research track for residents that is integrated with the psychiatry residency program at the Medical University of South Carolina. Trainees participate half-time in an intensive mentored research rotation. Each resident is matched with an active researcher who serves as a primary mentor and guides trainees through their projects. The program supplements training with formal didactic seminars to develop skills critical for a successful research career, including methodological skills, communication and presentation skills, research ethics and attitudinal skills.

Application requirements and deadlines are listed on our website, education.musc.edu/DART

Resident Research Track

CURRENT TRAINEES

DART Resident Research Track trainees are working with both seasoned and early career mentors to support their diverse research interests.



Sean Christensen, M.D.

General Psychiatry Resident

Research Interests: Utilizing the digital health space for developing patient-centered technologies. Additional focus on usability and device integration.

DART Project: Feasibility of voice analysis in patients receiving electroconvulsive therapy for depression and identification of important characteristics and changes in voice features.

Mentors: Mark George, M.D., Gregory Sahlem, M.D., and Baron Short, M.D.



Lauren Das, M.D., M.S.C.R.

General Psychiatry Resident

Research Interests: Evaluating Resident wellness, mental health and substance use.

DART Project: Surveying resident mental health and wellness during COVID-19, including stress, depression, and binge drinking

Mentors: Karen Hartwell, M.D., and Angela Moreland, Ph.D.



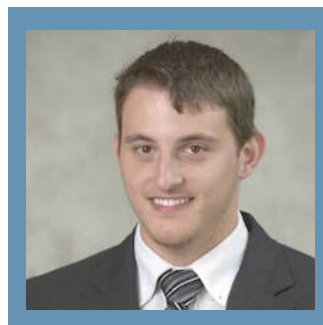
Patrick Robbins, M.D.

General Psychiatry Resident

Research Interests: Evaluating the emerging increase in benzodiazepine use, and interest in fields of consultation-liaison psychiatry and forensic psychiatry

DART Project: His research will focus on benzodiazepines, their connection to delirium, and patient knowledge of associated risks.

Mentor: Benjamin Kalivas, M.D.



Michael Norred, M.D.

Combined Internal Medicine & Psychiatry Resident

Research Interests: Utilizing neuromodulation for improved outcomes for patients with depression and insomnia.

DART Project: Feasibility and tolerability of oncurrent CBT-I with rTMS for treatment resistant depression and comorbid insomnia.

Mentors: Mark George, M.D., Lisa McTeague, Ph.D., Gregory Sahlem, M.D., and Baron Short, M.D.

WELCOME

New Resident Trainees



Corey Hassell, M.D.

General Psychiatry Resident

Mentored by Jessica Broadway, M.D., Tara Wright, M.D., and Kelly Barth, D.O.



Manish Karamchandani, M.D.

Combined Neurology & Psychiatry Resident
Mentored by Robert Malcolm, M.D., and Jennifer Jones, M.D.



Emily Whisler, D.O.

General Psychiatry Resident
Mentored by M. Frampton Gwynette, M.D. and Laura Carpenter, Ph.D.

FLEX Research Elective

CURRENT TRAINEES

In March 2020, the DART Program welcomed its first cohort of FLEX Research Elective trainees. This program is open to College of Medicine Students at MUSC as part of the preclerkship curriculum. Students were matched with a mentor who guided them through a research project. FLEX trainees trained alongside both DART Residents and Summer Fellows. Their final projects will be presented at the FLEX Research Fair in June 2020.



Peter Leahy received his Bachelor of Arts in History and Spanish from Clemson University. Peter has an interest in neuroimaging and better clarifying the pathways implicated in addiction. He is currently studying cue reactivity in tobacco users. with his mentors, Dr. Erin McClure and Dr. Rachel Tomko.



Layne Walker received her undergraduate degree in Public Policy Studies from Duke University. Her research background includes adolescent chronic illness management, lung cancer screening and diagnosis, and severe asthma treatment. Under the mentorship of Dr. Lisa McTeague, PhD, Layne will be working in the Brain Stimulation Lab researching psychosocial interventions in stroke survivors as well as the use of repetitive transcranial magnetic stimulation to improve cognition in the stroke population.



Julia Rodes received her Bachelor of Science in Biology from the South Carolina Honors College at the University of South Carolina in 2013. For her undergraduate research thesis, Julia investigated the effects of volatile anesthetics on neuronal dendritic retraction. She is now interested in neuronal plasticity and clinical management of chronic pain. Julia will be working with her mentors Dr. Jeffrey Borckardt, Dr. Taylor Crouch, and Dr. Kelly Barth to understand gender differences in pain treatment outcomes and the effects of rehabilitation treatment on pain thresholds.



DART Trainee awards and scholarship

Matthew Fadus, M.D.

awarded the APA Leadership Fellowship

Brandon Bentzley, M.D.

received the 2019 Ruth Fox Scholarship

Victoria Ragland received the Futures in Neurological Research Scholarship

Caitlyn Hood, M.S. received the NIDA Director's Travel Award

Michael Norred, M.D. & Patrick Robbins, M.D. appointed Psychiatry Chief Residents

Michael Capata, M.D.

received the Resident Scholarship for the 2020 Clinical TMS Society PULSES Training

Delisa Brown, Ph.D. awarded the 2019 Research Society on Alcoholism Junior Investigator Award & Travel Award

Summer Fellowship

We are pleased to welcome 14 outstanding students to the 2020 DART Summer Fellowship Program

For the first time ever, the DART Summer Fellowship Program will be held virtually, in response to COVID-19. Students will work remotely with their mentor to gain valuable research experience and knowledge. All meetings and didactic seminars will be delivered virtually. Students will give a virtual research presentation at the annual DART Summer Research Day on Friday, July 31, 2020.



HOLLIS CHILLURA
University of South
Carolina Honors College
Mentor: Dr. Jennifer Jones



ERIN MARTIN
MUSC
Mentor: Dr. Aimee
McRae-Clark



BRIANA HUNT
College of Charleston
Mentors: Drs. Lindsay
Squeglia & Brittany Bryant



ALEX KAHN
University of Florida
Mentor: Dr. Bashar
Badran



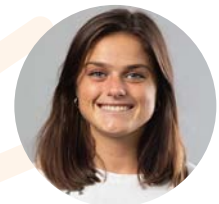
EMILY KARPf
College of Charleston
Mentor: Dr. Rachel
Penrod-Martin



ZAHRAA ATOUI
American University of
Beirut
Mentor: Dr. Amber Jarnecke



JENNY NANKOUA
College of Charleston
Mentor: Dr. Rachel
Tomko



LOGAN MANUSKY
College of Charleston
Mentors: Drs. Howard
Becker & Marcelo Lopez



LARRY CHEN
Indiana University
Bloomington
Mentor: Dr. Tracy Smith



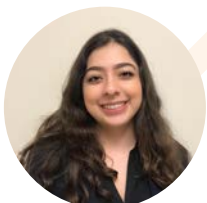
MARGARET ZIELINSKI
Westmont College
Mentor: Dr. Aimee
McRae-Clark



BRIANNA POLYAK
University of Texas Rio
Grande Valley School of
Medicine
Mentor: Dr. Jennifer Dahne



ISABELLA DUBROW
College of Charleston
Mentors: Drs. Angela
Moreland & Nada
Goodrum



AILEEN KANGAVARY
California State University
Northridge
Mentor: Dr. Elizabeth
Santa Ana



JOY GULLO
University of Connecticut
School of Medicine
Mentor: Dr. Phillippe
Cunningham

DID YOU KNOW?

2019 DART Summer Fellows **Raquelle Borgeois, Iris Sakamoto, Andrew Rowley, Madeline Hohmeister, and Marinna Smith** also presented their posters at the 2019 Perry V. Halushka Research Day at MUSC.

Select Publications

Unconscious Bias and the Diagnosis of Disruptive Behavior Disorders and ADHD in African American and Hispanic Youth. **Fadus, M.C.**, Ginsburg, K.R., Sobowale, K., Halliday-Boykins, C.A., Bryant, B.E., Gray, K.M., Squeglia, L.M. *Academic Psychiatry*, 2019.

NMDA receptor partial agonist, d-cycloserine, enhances 10 Hz rTMS-induced motor plasticity suggesting long term potentiation (LTP) as underlying mechanism. **Brown, J.C.**, DeVries, W.H., Korte, J.E., **Sahlem, G.L.**, Bonilha, L., Short, B.E., George, M.S. *Brain Stimulation*, 2020.

Rethinking the Language of Substance Abuse. **Fadus, M.C.** *Current Psychiatry*, 2020.

A case series exploring the effect of twenty sessions of repetitive transcranial magnetic stimulation (rTMS) on cannabis use and craving. **Sahlem, G.L.**, Short, E.B., **Fox, J.B.**, Sherman, B.J., Manett, A.J., Malcolm, R.J., George, M.S., McRae-Clark, A.L. *Brain Stimulation*, 2020.

N-acetylcysteine for the treatment of comorbid alcohol use disorder and posttraumatic stress disorder: Design and methodology of a randomized clinical trial. Back, S.E., Gray, K., Ana, E.S., **Jones, J.L.**, Jarnecke, A.M., Joseph, J.E., Prisciandaro, J., Killeen, T., **Brown, D.G.**, Taimina, L., **Compean, E.**, Malcolm, R., Flanagan, J.C., Kalivas, P.W. *Contemporary Clinical Trials*, 2020.

Adherence Across FDA-Approved Medications for Alcohol Use Disorder in a Veterans Administration Population. **Walker, J.R.**, Korte, J.E., McRae-Clark, A.L., Hartwell, K.J. *Journal on Studies of Alcohol and Drugs*, 2019.

Accommodation for Patient with Mental Illness Under the Americans with Disabilities Act and Rehabilitation Act. **Robbins, P.**, **Lewis, E.T.** *Journal of the American Academy of Psychiatry and the Law Online*, 2019.

Associations of Substance Use with Hospitalization and Virologic Suppression in Southern Academic HIV Clinic. **Tolson, C.**, Richey, L.E., Zhao, Y., Korte, J.E., Brady, K., Haynes, L., Meissner, E.G. *The American Journal of Medical Sciences*, 2018.

Alpha Omega Alpha Honor Medical Society: A Commitment to Inclusion, Diversity, Equity, and Service in the Profession of Medicine. Byyny, R.L., Martinez, D., Cleary, L., Ballard, B., Barth, B.E., **Christensen, S.**, Eidson-Ton, W., Estevez-Ordonez, D., Fuhrer, J., Kinzie, J.M., Lee, A.L., Lynch, C., Pfeil, S., Schoenbaum, E. *Academic Medicine*, 2019.

Select Presentations

Elementary Education Disciplinary disparities and Single-Parent Households. **Fadus, M.C.**, Squeglia, L.M., Valade, E.A. Presented at the South Carolina Psychiatric Association Annual Meeting, January, 2020.
[1st Place in the SCPA Poster Presentation Competition!](#)

Changes in Voice Features in Patients Receiving Electroconvulsive Therapy for Depressive Disorders. **Christensen, S.**, **Howard, S.**, Barrett, C., Wahlquist, A., **Walker, L.**, Kamperman, S., Short, B., **Sahlem, G.**, George, M. Presented at the South Carolina Psychiatric Association Annual Meeting, January, 2020.
[2nd Place in the SCPA Poster Presentation Competition!](#)

Psychiatric Legal Issues on Inpatient Services. **Robbins, P.** Interdepartment Lecture for Internal Medicine Residents at the MUSC, Charleston, SC.

Clinical Issues related to Synthetic Opioid Case Report. **Capata, M.** & Hartwell, K. Presentation in the 2019 Project ECHO Teleconference Didactic Series, Charleston, SC.

Psychiatry Consults and MAT in patients with IVDU at an Academic Hospital: A Retrospective Analysis. **Book, G.**, **Kalivas, B.**, Mack, H., & **Barth, K.** Presented at the 2019 Academy of Consultation-Liaison Psychiatry Annual Meeting. San Diego, CA

Physician's Attitudes Regarding Patients with Opioid Use Disorder. **Capata, M.** & Hartwell, K. Poster accepted for presentation at the 2020 College on Problems of Drug Dependence Annual Meeting, Hollywood, FL.

Dextromethorphan use resulting in violent psychosis in a patient with undiagnosed bipolar disorder. **Book, G.**, **Christensen, S.**, Burdette, L., & Mullinax, K. Poster presented at the Association of Medicine and Psychiatry Annual Meeting, Atlanta, GA.

Voice as biomarkers for Response to Electroconvulsive Therapy. **Christensen, S.**, **Howard, S.**, **Walker, L.**, Barrett, C., White, C., Short, B., **Sahlem, G.**, George, M. Invited presentation to the 2020 NYC Neuromodulation Online Conference, Virtual meeting.

Alumni Updates

NEW FRONTIERS IN MACHINE LEARNING

Samuel Howard, M.D.

2017 DART Summer Fellow

Mentored by Bernadette Cortese, Ph.D.

Sam Howard, M.D., matched with his first choice residency program and will be starting his General Psychiatry residency at MUSC this summer. Since his DART training, Sam has worked with fellow DART trainee Sean Christensen, M.D., on the VAPRE study, utilizing machine learning to assess changes in speech patterns in depressed patients undergoing ECT. They presented preliminary results at the 2019 SCPA meeting and their poster placed second in the poster competition. Drs. Howard and Christensen have also collaborated with Jihad Obeid, M.D., in a study using machine learning to identify and predict suicide attempts and self-harm behaviors using a chart review. The publication of their findings is in preparation.



GRADUATE SCHOOL & BEYOND

Celensia Tolson, M.S.

2016 DART Summer Fellow

Mentored by Eric Meissner, M.D., Ph.D

Celensia Tolson, M.S., graduated magna cum laude from the University of South Carolina with a Bachelor of Science in Biochemistry and Molecular Biology and a minor in Medical Humanities. Following her DART training, she worked as a certified pharmacy technician and continued to collaborate with her mentor, Eric Meissner, M.D., Ph.D., and other MUSC physicians to publish their research findings. Celensia then obtained her master's degree in Microbiology and Immunology from Georgetown University. During graduate school, she worked in a virology lab focusing on Hepatitis Delta Virus. Celensia recently accepted a position as a Research Assistant in a HIV/Immunology lab at Georgetown University. Utilizing her degrees, she plans to apply for the PhD program at Georgetown University, as well as obtain her certificate in Biohazardous Threat Agents & Emerging Infectious Diseases.



INSPIRING WOMEN TO CAREERS IN STEM

Jacqueline Phillips

2018 DART Summer Fellow

Mentored by Lindsay Squeglia, Ph.D.

After graduating from University of South Carolina, Jacqueline accepted a position as Project Engineer with ExxonMobil. She is currently supporting the Cracking & Light Ends Division of the Baton Rouge Refinery in Louisiana. Managing projects, she has applied skills strengthened during her DART Training, such as effective communication, time management and teamwork. She also helped to lead the Introduce a Girl to Engineering Day (pictured above, third from left), inspiring about 150 young girls in pursue careers in science, technology, engineering and math.

Upcoming Conferences

**American Society of Addiction Medicine
Annual Conference-Innovations in
Addiction Medicine and Science**
April 2-5, 2020
Denver, Colorado

**Society of Biological Psychiatry
75th Annual Meeting**
April 30-May 2, 2020
New York, New York

**American Psychiatric Association
173rd Annual Meeting**
April 25, 2020
Philadelphia, Pennsylvania

**The College on Problems of Drug
Dependence 82nd Annual Meeting**
June 20-24, 2020
Hollywood, Florida

**Research Society on Alcoholism
43rd Scientific Meeting/ISBRA Congress**
June 20-24, 2020
New Orleans, Louisiana

The 55th Perry V. Halushka Research Day
November 1, 2020
Medical University of South Carolina
Charleston, South Carolina

**American Academy of Addiction
Psychiatry 31st Annual AAP Meeting**
December 10-13, 2020
San Antonio, Texas

**American College of
Neuropsychopharmacology 59th Annual
Meeting**
December 6-9, 2020
Phoenix, Arizona

**American Association for the
Advancement of Science Annual Meeting**
February 11-14, 2021
Phoenix, Arizona

**Society for Research on Nicotine &
Tobacco 25th Annual Meeting**
February 24-27, 2021
Baltimore, Maryland

Loan Repayment Program (LRP)



National Institute
of Mental Health

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. Examples of DART alumni who completed the LRP are Drs. Kelly Barth, Bryan Tolliver, Jennifer Jones, & Joshua Brown.

For more information, please visit <http://www.lrp.nih.gov>

DART

DRUG ABUSE RESEARCH TRAINING

The DART Program at the Medical University of South Carolina is directed by Drs. Sudie Back, Sarah Book, Kelly Barth, & Kathleen Brady. For more information, please contact DART Program Coordinator, Emily Bristol (DART@musc.edu).

For additional information or to apply, please visit our website:
medicine.musc.edu/DART