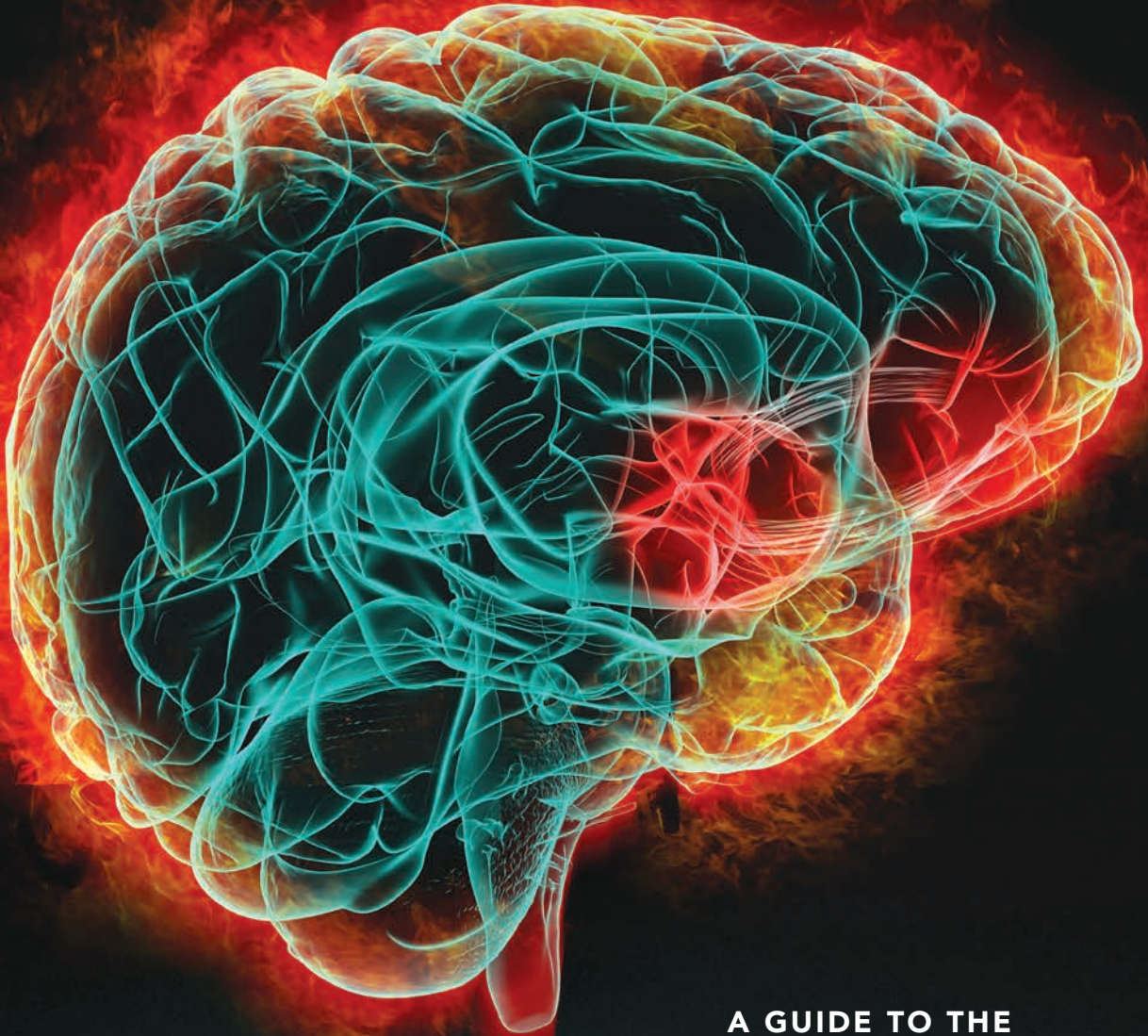




**EMORY**  
UNIVERSITY  
SCHOOL OF  
MEDICINE

**Department of Psychiatry  
and Behavioral Sciences**



**A GUIDE TO THE  
OUTSTANDING PROGRAMS  
AND PEOPLE OF THE  
EMORY DEPARTMENT  
OF PSYCHIATRY AND  
BEHAVIORAL SCIENCES**

**2023**

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*The cover art was created by Bona Kim, business analyst and senior medical illustrator for Visual Medical Education at the Emory School of Medicine. This image, used on the cover, represents the impact of inflammation on a dopamine-regulated classic reward circuit involving the brain's ventral striatum and ventromedial prefrontal cortex (shown in red) in depression. For more on this research by Jennifer Felger, see "The Inflamed Brain" on page 28.*

# FROM THE CHAIR



We often talk about the need to break down silos and work across departments and disciplines. The people in the Emory Department of Psychiatry and Behavioral Sciences put those words into action.

The department's many interdisciplinary programs span the entirety of the human life cycle, from work with neonatal children to the care of older adults. As part of the Emory Brain Health Center, we provide comprehensive psychiatric services for all of Emory Healthcare and through the Grady Health System and the Atlanta Veterans Affairs Medical Center.

Tackling problems face to face with patients puts academic theories to the test. We gain knowledge through caring for our patients; we dig deeper with research and then integrate that with patient care. This is what "evidence-based" treatment means. We are one of the top federally-funded departments of psychiatry and behavioral sciences in the country and have extensive research expertise across a wide spectrum of inquiry.

The department provides a myriad of different training experiences for undergraduate students, medical students, pre- and postdoctoral graduate students, psychiatric residents, and fellows in a variety of psychiatric subspecialties. Our students say their education delivers diverse clinical experiences in real-world situations and gives them opportunities to learn across many disciplines.

The COVID-19 pandemic created a tidal wave of isolation and loneliness and exacerbated many mental health problems. It also brought those problems into the public spotlight, increasing the urgency to address them.

We see many opportunities going forward to change the mental health landscape and strengthen our community using culturally informed approaches to care. We are committed to creating inclusive communities. Diversity, equity, and social justice are primary missions for our staff, students, and faculty. We invite you to explore our website for our latest news and learn more about our goals and values: [med.emory.edu/departments/psychiatry](http://med.emory.edu/departments/psychiatry).

Many, many thanks to our generous donors who have been so integral in helping us fulfill our mission. We literally would not be where we are without their support. I am so grateful for their key role in funding innovative programs in clinical care, education, and research.

Finally, this update highlights some of the programs, staff, students, faculty, and members of our community who helped create and guide these programs, but it is not all-encompassing. We hope to have regular updates using this format and will continue to highlight different programs in the department.

Thanks to all of you for making this possible.

**William M. McDonald, MD**

Department Chair

Professor and J.B. Fuqua Chair for Late-Life Depression and Reunette W. Harris Chair for Psychiatry and Behavioral Sciences



# Getting Your Life Back

*Depression and anxiety  
in people of all ages  
get treated at Emory Psychiatry*

BY MICHELLE HISKEY

PHOTOS BY BRANDON CLIFTON



*Dorothy  
Cunningham*





**Even before she got to the airport security screening in New York, Dorothy Cunningham’s 2019 trip to Europe had been a bust.** A leg injury kept her from keeping pace with her friends, and from sleeping well.

In her early 80s, she sadly knew this overseas trip might be her last, and her trusty walking stick held so many memories. Though the stick had

been through security many times, in the New York airport, an agent refused to let her pass with it. She never saw it again.

She felt defeated and depleted as she returned to Atlanta and couldn’t shake it off. That wasn’t like her, an Air Force Reservist and nurse practitioner. Difficult childhood memories surfaced, and she no longer enjoyed friends and activities that had made her happy. That’s when she sought help, and eventually recovered her mental health through individual therapy and a weekly therapy group with 15 other senior adults at Emory Psychiatry’s Fuqua Center for Late-Life Depression.

“A lot of people have had really rough problems with depression and anxiety,” she said. “I found myself helping others in the group, but I had to learn how to let other people help me too. I found great joy in that.”

About one out of every six adults will have depression at some time in their life, according to the Centers for Disease Control and Prevention (CDC). Every year, it affects about 16 million American adults. Anyone can get it, at any age.

“In the geriatric population, depression many times is under-diagnosed and under-treated,” says Adriana P. Hermida, MD, director of the Emory Geriatric Psychiatry Clinic, established through Fuqua Center funding. “It’s sometimes misdiagnosed as dementia or misdiagnosed as other disorders. We see a different presentation, not necessarily sad mood but lack of motivation, lack of engagement, more somatic complaints and many primary care visits.”

The Fuqua Center for Late-Life Depression was established in 1999 by a gift from the J.B. Fuqua Foundation to advance awareness and treatment of late-life depression. A rags-to-riches businessman who believed deeply in public service and philanthropy, J.B. Fuqua had unique insight into severe depression because of his own 50-year experience battling it.

Anxiety disorders often accompany depression, bringing intense, uncontrollable feelings of anxiety, fear, worry, and/or panic. This can trigger the loneliness



**“When you teach people how to be more comfortable with their emotions, it kind of opens up a whole new world.”**

— JOCELYN CHEN WISE

and isolation that prompts people like Dorothy Cunningham to seek help. “When you teach people how to be more comfortable with their emotions, it kind of opens up a whole new world,” said Jocelyn Chen Wise, LCSW, MPH, Fuqua Center project director and clinical social worker.

“The severity of depression is underestimated because it can be a very chronic illness, with patients withdrawing from society and having years of disability,” noted Patricio Riva Posse, MD, an Emory psychiatrist, neurologist and director of the Treatment-Resistant Depression

Program. “Depression and anxiety can be disabling and change the course of someone’s life. So when we successfully treat someone with depression and anxiety, we’re giving them their life back.”

People of all ages suffering from anxiety and depression seek treatment at Emory, starting with young people in the Child and Adolescent Mood Program (CAMP), to centenarians at the Fuqua Center. No magic bullet exists for solving these common diagnoses, but as an academic medical center, Emory physician researchers are constantly finding and refining

Director of the Emory Geriatric Psychiatry Clinic, Adriana P. Hermida



**“In the geriatric population, depression many times is under-diagnosed and under-treated. It’s sometimes misdiagnosed as dementia or misdiagnosed as other disorders.”**

— ADRIANA P. HERMIDA

evidence-based therapies. Emory offers transcranial magnetic stimulation (TMS), ketamine and esketamine treatments, electroconvulsive therapy, and other neuromodulation techniques in clinical trials to test new therapies such as vagus nerve stimulation (VNS) and deep brain stimulation (DBS).

“The goal of this dynamic institution is that every encounter with a patient is first and foremost for the patient and the family,” said Riva Posse. “But in addition to the clinical services, our mission encompasses education and research. We are fostering the next generation of psychiatrists in our medical students, residents, and fellows. And our clinical encounters are an opportunity to collect data that will teach us about depression and anxiety. We hope to use this new knowledge for the benefit of the wider population.”



“Black youth are less likely to seek out and remain in mental health care, so there lies a really critical gap... Collaboration with youth and families can really help us get to culturally responsive treatments.”

— JOYA N. HAMPTON-ANDERSON

Established in early 2021, COPE delivers individual therapy, family therapy, group therapy, and a multifamily skills group—all online. “Telemedicine has opened the doors for so many people,” Schneider pointed out. “The gold standard OCD treatment is exposure and response prevention (ERP), and the core of our program is intensive daily ERP.”

“Sometimes kids fear things that they interact with at home, and these might be harder to replicate or do in a therapy office,” she said. “With telemedicine, we can work with them in the kitchen or bathroom or bedroom, going through some of their rituals. For someone with fears about contamination related to animals, we might have them practice petting their dog without washing their hands. Exposures are a way to practice living your life by facing fears and still doing what you care about—even when anxiety is present.”

Joya N. Hampton-Anderson, PhD. This is her research premise as director of the ENhancing Resilience Cultivating Health (ENRICH) Program, a community-based participatory research lab seeking the most effective mental health treatments for Black youth.

In 2023, ENRICH will be offering interventions, collecting patient feedback, and developing a culturally responsive treatment program for Black youth.

“Black youth are less likely to seek out and remain in mental health care, so there lies a really critical gap,” Hampton-Anderson said. “It could be that existing therapeutic services are not what some scholars call culturally responsive, because many of our gold standard treatments were developed with middle-class white populations. I seek to understand what happens when we combine what the research says about

treating mood concerns in youth with what we know about culturally specific protective factors, such as positive racial identity development, family and kinship networks, and spirituality. Collaboration with youth and families can really help us get to culturally responsive treatments.”



CAMP Co-Director Allison M. LoPilato, PhD, noted that young people are experiencing historic levels of depression, anxiety, psychiatric hospitalization, and suicide.

“The earlier we start treating children’s mental health, the better outcomes we will have,” LoPilato said. “We can teach them critical thinking and coping skills to help manage their emotions and navigate the inevitable ups and downs of growing up. We are also able to give parents the tools to help support their kids, which is huge. By intervening early we set our kids on a better course and give them a home here at CAMP that they can come back to when they need a tune-up and before things get bad.”

Black youth face greater risk for mental stressors, and capitalizing on culturally-specific coping strategies may help, says

“By treating the OCD, patients then have the skills to face other types of anxiety or challenges and their world opens up.”

— REBECCA L. SCHNEIDER

## DBS, a lifesaver for treatment-resistant depression

Along with the outpatient psychiatric services that are commonly sought by families and older adults, Emory has developed a subspecialty in interventional psychiatry. In this work, researchers have pioneered newer investigational procedures such as deep brain stimulation (DBS). These novel interventions are offered to patients who have failed to respond to multiple lines of treatment. It is estimated that around 10 percent of patients with depression are “treatment-resistant.”

“For those patients, solutions outside the box but within evidence-based care are only accessible in practices with the



Joya N. Hampton-Anderson and Allison LoPilato

## No longer terrified

John Arrington was losing the battle against thoughts that kept intruding in his mind. He had obsessive-compulsive disorder (OCD), and he was barely passing ninth-grade classes.

One persistent thought was self-harm. Arrington feared the stairway railings at his school because he feared he might jump over. He became terrified to walk between floors, which his class schedule required. The fact that none of this made sense made all of it worse. Like Cunningham, he felt alone and isolated.

“I had become so afraid of something happening to me that eventually there wouldn’t be anything I can

do,” Arrington said of his spiraling thoughts. “Talking to other people with OCD, through people who have treated OCD successfully, has made all the difference in the world.”

Arrington got help through the Child OCD Program at Emory (COPE), an intensive outpatient telehealth program for ages 12 to 18. His therapy involved progressive exposures to things he feared, like railings, to practice responses more in line with his values and the life he envisions for himself.

Today Arrington’s grades are good, he’s on track to graduate from high school, and plans a military career and a degree in aerospace engineering. Without the early intervention through

COPE, he might have waited the average 14 to 17 years that OCD patients suffer before receiving appropriate help, said COPE Director Rebecca L. Schneider, PhD.

“By treating the OCD, patients then have the skills to face other types of anxiety or challenges and their world opens up, which can also help with the depression,” she said.

## At CAMP, learning coping skills

These teenagers and their families, from across Georgia, are taking advantage of rapid advancements in telemedicine that came about during COVID-19.





“When we successfully treat someone with depression and anxiety, we’re giving them their life back.”

— PATRICIO RIVA POSSE

infrastructure that we at Emory have,” Riva Posse said.

In the past two decades, breakthroughs in treating Parkinson’s disease through neurosurgical interventions helped Emory researchers pioneer DBS. The surgery involves implanting thin electrodes in precise locations in the brain. Those are connected to a small battery in the chest that delivers electrical pulses. This is an approved treatment for neurologic conditions like Parkinson’s disease, tremor, and epilepsy, but is still in earlier phases of development for psychiatric indications.

“When patients with depression respond to DBS, we have noticed that this improvement is stable,” Riva Posse said. “A common theme in patients with treatment-resistant depression is that other treatments have limited duration. DBS has allowed patients to plan for the future without the uncertainty of a relapse in the depths of depression.”

Research in DBS for depression started at Emory in 2007, and almost 40 patients have received the procedure. At Emory, the procedure is being refined to improve the treatment’s effectiveness.

In 2019, Tyler Hajjar’s DBS procedure helped him get his life back. Depression and suicidal thoughts had consumed him for years, undermining his ability to maintain friendships and feel purpose in life. After trying many other treatments, Hajjar agreed to try DBS. Surgeons implanted a stimulator device in his brain that delivers electrical impulses to circuits of the brain associated with depression. The device also collects data used in Emory research.

Now 31, Hajjar has hope and belief that his experience can help others. His experience led him to speak during a National Institutes of Health webinar and at the 2022 American Association of Neurological Surgeons annual meeting.

“Before, I couldn’t help that feeling almost like my lights were on and nobody was home,” Hajjar said. “I have bad days now, but they are normal bad days, and I know there’s gonna be a tomorrow.” ■



“Your Fantastic Mind,” a TV series created through a partnership of Emory and Georgia Public Broadcasting, tells Tyler Hajjar’s story with behind-the-scenes footage of his entire deep brain stimulation surgery.

DONOR SPOTLIGHT

The Fuqua Family Legacy of Philanthropy

J. Rex Fuqua wants people to understand how prevalent mental illness is. “One in five people suffer from a mood disorder of some kind. Anxiety, depression, bipolar disorder, addiction—these conditions affect a significant percentage of the population,” he says.

Fuqua’s father, J.B. Fuqua, “suffered from depression for most of his life” and provided support to establish the Fuqua Center for Late-Life Depression, as well as the J.B. Fuqua Chair for Late-Life Depression, currently held by William M. McDonald, MD.

J.B. Fuqua created a multimillion-dollar business empire that included television and radio stations and nearly two dozen other companies. He embraced philanthropy and his family continues that legacy. Rex Fuqua is now president of the family’s two foundations, the J.B. Fuqua and Realan Foundations.

Ensuring that people have access to effective mental health interventions and treatments has long been a priority for the Fuqua family.

“My mother established a chair in psychiatric imaging and therapeutics, with the goal of supporting research into the neurological aspects of mental illness,” he says. Deep brain stimulation, a key treatment for depression, was developed as a result. Rex Fuqua funded a chair in child and adolescent mental health and mood disorders. “That program now serves 1,500 kids a year,” he says.

He also has made training a philanthropic priority. “If you train one clinician, that person can treat hundreds of people over a lifetime,” he says. “If that clinician then trains others, the multiplier effect is tremendous.”

Fuqua says that providing access to equitable treatment is equally important. “We’re making a dent but need greatly exceeds current capacity statewide.” Philanthropy is vital to help extend mental health treatment to those with limited options, he says.

For more information about these programs:

**FUQUA CENTER FOR LATE-LIFE DEPRESSION**  
fuquacenter.org

**CHILD AND ADOLESCENT MOOD PROGRAM (CAMP)**  
camp-emory.com

**CHILD OCD PROGRAM AT EMORY (COPE)**  
med.emory.edu/departments/psychiatry/programs/cope

**TREATMENT RESISTANT DEPRESSION PROGRAM**  
emoryhealthcare.org/centers-programs/treatment-resistant-depression-program



# Confronting Trauma

*Whether from the battlefield or from childhood, post-traumatic stress is treatable.*

BY JIM AUCHMUTEY

PHOTOS BY BRANDON CLIFTON



*Marcenda Wilkes works with Nia clinician Christina Clarke.*

**Members of the Emory Department of Psychiatry and Behavioral Sciences study and treat all kinds of trauma – military and civilian, acute and chronic – in several groundbreaking programs through the [Grady Health System](#) in Atlanta and in partnership with the [Atlanta Veterans Affairs Medical Center](#).**

Often people only associate post-traumatic stress disorder (PTSD) with military service-members or veterans. But civilians also experience trauma and some will suffer long-term effects from it. In their studies of racially marginalized and low-resourced adults who seek care at Grady, an urban safety-net hospital, Emory researchers are discovering that this population is particularly hard hit by PTSD. The programs created and run by Emory trauma experts put that knowledge into action.

Here are some of those programs.





## Civilian Trauma

Marcenda Wilkes attended group therapy sessions at Grady Memorial Hospital for more than three years before she felt comfortable enough to speak. She knew she would need to tell her story eventually. Her therapists in the Nia Project, a program for traumatized women at Grady, emphasized that one of the best ways to deal with trauma was to confront it: Master the story so it doesn't master you.

But her story was painful. She had a long history of trauma, including child abuse, which led to years of intermittent drug use, depression, and suicidal thoughts. On the day she first told her narrative, the experience did not produce the catharsis she had hoped for.

"I cried the whole time I was talking," Wilkes remembers. "I thought I'd be more relaxed after I shared my story, but I wasn't. It overwhelmed me."

**"I've told my story many times now. Each time you do it, you get more release from it."**

— MARCENDA WILKES

After phoning one of her therapists, she realized that the process of dealing with her trauma was just beginning.

When we think of post-traumatic stress disorder (PTSD), we usually think of military veterans who have survived perils and witnessed bloodshed in places far from home. But many people who have never served in the armed forces or been to a war zone have

experienced traumas that are just as damaging to the psyche and the body. Wilkes, a 50-year-old mother of two in the Atlanta suburb of Decatur, is one of them.

Marcenda Wilkes never went to war, but her struggle was every bit as traumatic as a combat veteran's. The abuse she suffered as a

child stopped when she was removed from her home at the age of 13, but the damage was done.

In 2007, Wilkes moved to Atlanta and took a job as a medical assistant. She sought psychotherapy and heard about the Nia Project, an Emory@Grady program that was designed to empower traumatized women who felt hopeless and powerless. The name means "purpose" and is one of the principles of Kwanzaa, the African American holiday celebration.

The Nia Project started 30 years ago as a research project to study the links between intimate partner violence and suicide. "I lost two patients to suicide in my practice before creating the Nia Project," says Nadine Kaslow, PhD, the Emory professor who founded and directs the program. "That's one of the reasons I'm doing this."

The project evolved as patients requested more therapy and group activities. Nia now offers 20 groups a week, along with holiday gatherings, a talent show, and art workshops.

"We try to build a sense of community for them," says Christina Clarke, PhD, an assistant professor in psychiatry who started working with Nia as a postdoctoral fellow. "It fills up their lives and helps them deal with the loneliness and isolation they feel."

Clarke is but one of the estimated 200 to 300 graduate students, interns, and postdoctoral residents who have been trained in the Nia Project. Kaslow says several hundred undergraduate and post-baccalaureate students have also gained hands-on experience in the program.

Wilkes has been with Nia for a decade now, making her one of the program's longest-tenured participants.

"I've told my story many times now," she says. "Each time you do it, you get more release from it. Trauma like mine stays with you. It's always right beside you. You learn to look over at it, recognize it, smile, and go on."

In a measure of her progress, Wilkes went to Florida in the fall of 2022 as an

American Red Cross volunteer to supervise relief efforts after Hurricane Ian. She recently got a passport that would allow her to work in international relief.

Wilkes's story demonstrates something Emory therapists stress whether they specialize in civilian or military trauma: People do recover. They exhibit amazing resilience as they learn to rise above the memories that have haunted them, to lead more fulfilling lives.

Some 70 percent of Americans will experience a traumatic event at some point in their lives, but only 6 to 8 percent will suffer post-traumatic stress. It can affect everything from sleep and diet to mental health and the body's susceptibility to chronic conditions like diabetes and heart disease.

The Grady Trauma Project (GTP) started in 2005 as an epidemiological survey and has become, according to its directors, the largest study of civilian trauma ever conducted. More than 14,000 Grady patients from the general medical clinics have



**"We're dealing with a patient population that often feels marginalized and powerless, and that just adds to the trauma."**

— ABIGAIL POWERS LOTT

been interviewed, and an astounding half of them have experienced post-traumatic stress at some point in their lifetime.

"We're dealing with a patient population that often feels marginalized and powerless," says Abigail Powers Lott, PhD,

co-director of the GTP, "and that just adds to the trauma."

Trauma can include a wide range of life shocks, from criminal and domestic violence to child abuse and sexual assault. Different types of traumas have different effects. The consequences of a onetime event like a car crash usually fade with time, while an act of violence at the hands of a loved one is more likely to cause lasting complications.

The Grady Trauma Project examines them all. "We study the ways trauma and stress get under your skin," Lott says.

One of the laboratories they use is the Startle Room, a booth where patients are exposed to loud noises, sudden blasts of air into the chest, or other "adverse cues." Doctors measure subjects' responses, tracking heartbeat, skin temperature and eye blinking in an effort to understand why some people are more vulnerable to trauma.

Other areas of research involve gender differences in trauma (women are more prone to post-traumatic stress), the role



Negar Fani in her lab. Photo by Patrick Heagney.





“Military service members can’t respond emotionally to what they’re experiencing in a combat zone. But they have to process it emotionally at some point or it can haunt them.”

— BARBARA O. ROTHBAUM



Air Force veteran Rebecca Dickey (R) meets with Katie Ragsdale, EHVP clinical psychologist.

of meditation and mindfulness in treating trauma, and the effects of racial discrimination on the brain and behavior.

“Racial trauma can have a slow, insidious effect on the brain,” says Negar Fani, PhD, principal investigator for the GTP. “We’re studying the ways in which experiences of racism eat away at a person, occupying their attention and consuming emotion regulation resources needed for day-to-day life tasks. They may be pre-occupied by these experiences, making it harder to focus. Over time, this can wear down the brain, and make marginalized individuals more susceptible to

mental health problems as well as neurodegenerative conditions, like Alzheimer’s and Parkinson’s.

“When you combine racial discrimination with some of the other stresses many of our patients feel, it’s an underappreciated, potent source of trauma,” says Fani.

### Military Trauma

“Most of us will experience a trauma, and it may be troubling for a while, but it gets less intense,” says Sheila Rauch, PhD, deputy director of the Emory Healthcare

Veterans Program. “But for some people those memories get stuck. That’s the best way to understand post-traumatic stress: a stuck memory.”

While Emory is pioneering the study of civilian trauma, it’s still deeply involved in the treatment of military veterans like Rebecca Dickey, a 43-year-old communications professional in Cherokee County, Ga. She served in the Air Force during the Iraq invasion in 2003 and was never the same.

Commissioned into the Air Force after graduating college, Dickey was working in public affairs at Davis-Monthan Air Force Base in Arizona when she heard that





“Most of us will experience a trauma, and it may be troubling for a while, but it gets less intense. But for some people those memories get stuck.”

— SHEILA RAUCH

For more information about these programs:

**NIA PROJECT**  
[psychiatry.emory.edu/niaproject](http://psychiatry.emory.edu/niaproject)

**GRADY TRAUMA PROJECT**  
[gradytraumaproject.com](http://gradytraumaproject.com)

**EMORY HEALTHCARE VETERANS PROGRAM**  
[emoryhealthcare.org/centers-programs/veterans-program](http://emoryhealthcare.org/centers-programs/veterans-program)

**WOUNDED WARRIOR PROJECT**  
[woundedwarriorproject.org](http://woundedwarriorproject.org)

a special-ops unit overseas needed a PA officer. She volunteered.

“I deployed to Iraq,” she says, “and found out they needed a physician’s assistant, not public affairs.”

Despite the mix-up, she stayed and wrote stories and took photographs documenting the missions she took part in. It was bruising work. She fell out of a helicopter and tumbled halfway down a mountain without a helmet. She was concussed several times when chopper and Humvee gunners returned enemy fire inches from her head.

“I wound up with four different brain injuries and a ruptured eardrum,” she says. “By the time my tour was over, my hair was falling out and I was having migraines.”

Dickey left the service, married a fellow Air Force officer, and they started a family. She continued having migraines, vertigo, extreme fatigue, and occasionally suffered stress seizures. Her condition reached a crisis in 2017, more than a decade after her discharge.

“I got to where I didn’t want to go to family gatherings or kids’ baseball games because I was afraid my body was going to rat me out.”

Dickey saw a trauma counselor, who told her about Emory’s Intensive Outpatient Program (IOP), a two-week treatment program for veterans experiencing PTSD and other mental health issues. The IOP, offered through the Emory Healthcare Veterans Program, is a national program supported by the Wounded Warrior Project to offer veterans the best care available while reducing barriers such as cost, access, and a high dropout rate from longer-term programs. More than 2,000 people have taken the course through the EHVP since it started in 2015, with an over 90 percent retention rate. “They’ve made the decision once and can get it done in two weeks,” says Sheila Rauch.

The IOP came out of a partnership with the Wounded Warrior Project’s Warrior Care Network, a national alliance of four academic medical centers known for their expertise in trauma research and clinical care. Emory is one of the four medical

centers that was enlisted by the Warrior Care Network to focus its experience and knowledge on intractable problems like PTSD.

Both the IOP and traditional outpatient programs use evidence-based treatments such as psychotherapy, medication, stress management skills, virtual reality, and prolonged exposure therapy, a groundbreaking treatment pioneered by Barbara O. Rothbaum, PhD, director of the Emory Healthcare Veterans Program, and Sheila Rauch.

“We see PTSD as fueled by avoidance,” says Rothbaum. “Military service members can’t respond emotionally to what they’re experiencing in a combat zone. But they have to process it emotionally at some point or it can haunt them.”

The Emory Healthcare Veterans Program helps them process these memories. Virtual reality can help veterans confront and process painful memories by telling their stories while wearing head-mounted display monitors that recreate the disturbing experiences.

“Virtual reality can help them to tap into their emotions,” Rothbaum says. “Most people see dramatic improvements in the 2-week program.”

Dickey signed up for the IOP with a specific goal in mind. On the day after it ended, her daughter’s school chorus was singing the national anthem at an Atlanta Braves game. It would be loud and crowded — the kind of scene she had long avoided because it triggered memories of the tumult in Iraq — but she was determined to be there for this signal moment in her family’s life.

“I was so nervous I wasn’t going to get through it,” Dickey remembers. “Sitting there in the stands, I kept hearing the doctors’ voices in my head: You can do it. You can do it.”

And she did.

“Post-traumatic stress is a very treatable disorder,” says Sheila Rauch. “You don’t have to suffer with it for the rest of your life. You can get over it.” ■

## PROGRAMS WITH IMPACT

The need is great: addiction, depression, trauma, mental illness that can lead to homelessness, isolation, suicide.

The clinical programs in the Emory Department of Psychiatry and Behavioral Sciences treat individuals with a range of mental disorders. They run the gamut from helping autistic adults find equilibrium in their everyday lives, to providing first-line interventions for people experiencing their first episodes of psychosis. Clinicians, educators, and researchers work together in these programs to provide specialized, evidence-based care.



EAC’s myLIFE Program enables participants to interact with a mix of neurotypical and neurodiverse peers in their age group.

### Emory Autism Center

The Centers for Disease Control and Prevention (CDC) defines autism spectrum disorder as a developmental disability, but mental health professionals prefer to view it as a difference, not a disability, and they counter the notion that to be different is to be less capable.

Mikle South, PhD, director of the Emory Autism Center, is one of them.

The Emory Autism Center (EAC) treats people of all ages — children, adolescents, adults. South says they “are leaning into adults” because of the need. “Children get support systems in school, but when they get out, there’s nothing.”



MIKLE SOUTH

South says the Emory Autism Center follows a groundbreaking model of inclusion and respect that values quality of life for a person’s entire lifespan: “We’re not trying to take away autism. We’re trying to support comfortable lives through adulthood.”

One way to do this is by encouraging autistic and neurodivergent people to set their own life goals, and by listening to them. Emory Autism Center aims to support quality of life “not how the medical world defines it, but how the person living it defines it.” South says it’s important to recognize diversity within the autism community. “One autistic person doesn’t speak for another one.”

EAC staff is made up of clinicians, educators, therapists, scholars, training fellows, and support group leaders who provide evidence-based services for autistic and neurodivergent individuals, their families, and community members throughout Georgia and the Southeast.

This focus on quality of life for adults is seen in two unique EAC programs: ITAP and myLIFE. Transitioning from high school or adolescence into adulthood is a critical time for autistic and neurodivergent people. ITAP (Individualized Transition to Adulthood Program) services are dedicated to improving that transition by starting the planning process early, providing support at the individual and system level, and focusing on the development of functional skills.

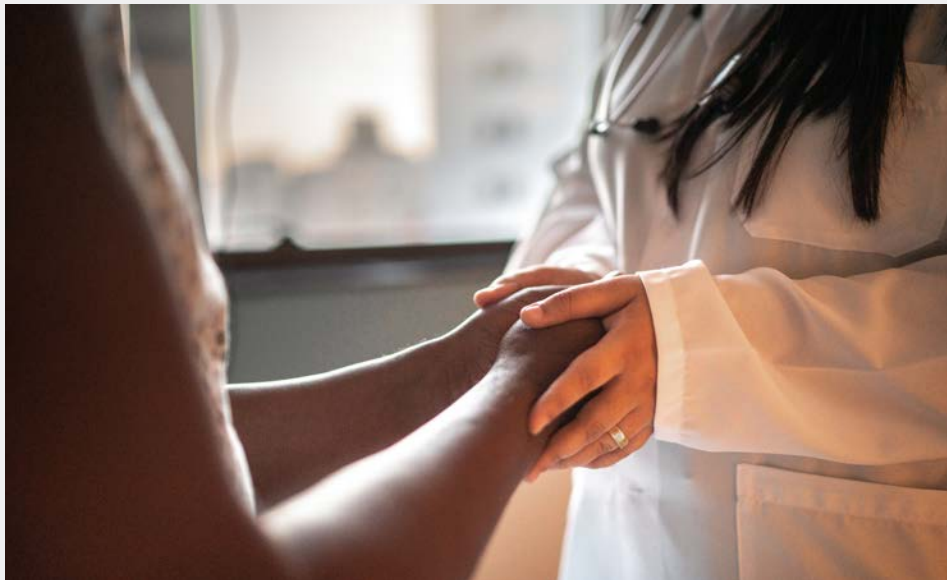
EAC’s myLIFE Program supports adults (18 and older) with a range of clinical programs, support groups, recreational activities, and social events.

The EAC is growing its programs to meet more needs. “One way we’re doing this is by training more fellows at all levels in this lifespan approach. That grows our ability to serve more people throughout the region,” says South.

This growth, says South, is being supported by the Autism Foundation of Georgia. ■

**EMORY AUTISM CENTER**  
 (404) 727-8350  
[autism.emory.edu](http://autism.emory.edu)





**Addiction Alliance of Georgia**

Substance use disorders are complex diseases. Individuals can go through treatment programs, enter recovery, but then have a recurrence of symptoms.

Research shows that overcoming addiction is not a matter of willpower.

“More people acknowledge it as a chronic disease but there is still a significant amount of stigma that exists. There’s still a belief that it’s a lifestyle choice and a lack of understanding that it’s a medical disease,” says Justine Welsh, MD, Emory

addiction psychiatrist, medical director of the Addiction Alliance of Georgia, and director of the Emory Addiction Center.

The Addiction Alliance of Georgia (AAG), a unique partnership of Emory Healthcare and the Hazelden Betty Ford Foundation, combines addiction-focused treatment and prevention programs with research and educational initiatives. Thanks to the AAG, people seeking treatment for addiction have a new community-based resource to turn to: the Emory Addiction Center.

The Emory Addiction Center was also made possible by almost \$10 million in donations from public and private community

partners, a volunteer effort spearheaded by business leaders Jack Hardin, Tom Johnson, and Frank Boykin. [See sidebar below]

The facility, on the Emory University Hospital campus at Wesley Woods, uses a multidisciplinary approach to substance use in individuals 14 years and older. Care teams, including addiction psychiatry/medicine specialists, licensed clinical social workers, and psychologists, provide individual therapy, psychiatric consultation, support groups, and medication management.

A higher level of outpatient care is delivered through the intensive outpatient program (IOP) for patients 18 and older. IOP immerses a patient in nine hours of group therapy per week, as well as medication management and individual therapy sessions, over a six-to-eight-week period.

Emory addiction psychiatrists specialize in treatment for individuals with both addiction and psychiatric disorders. “The majority of people with a substance use disorder also have one or more co-occurring psychiatric disorders, such as major depressive disorder, bipolar disorder, or generalized anxiety disorder. It is crucial to treat co-occurring conditions,” says Welsh.

Welsh says the intensive program provides more structure to those who need it: “This amount of treatment provides greater



“More people acknowledge it as a chronic disease but there is still a significant amount of stigma that exists. There’s still a belief that it’s a lifestyle choice and a lack of understanding that it’s a medical disease.”

—JUSTINE WELSH

monitoring for substance use and helps with accountability. It helps patients develop the skills needed for recovery.”

The Emory Addiction Center can serve people across the state with either in-person or telemedicine appointments. Welsh projects they will be able to treat over 2,000 people by 2027.

Welsh says a future goal of the Emory Addiction Center is to offer a continuum of care across different levels, including consultation services for patients who are medically admitted to hospitals. “Addiction is a treatable clinical disease. We want our patients and their families to feel supported.” ■

**ADDICTION ALLIANCE OF GEORGIA (AAG)**  
addictionallianceofgeorgia.org

**EMORY ADDICTION CENTER**  
med.emory.edu/departments/psychiatry/programs/addiction

**Vagus Nerve Stimulation to Overcome Opioid Addiction**

The vagus nerve is the longest cranial nerve in our bodies. Stretching from our guts to our brains, it carries vital information that controls digestion, heart rate, mood, and the immune system. It also affects areas of the brain involved in the perception of pain.

Pain is a powerful symptom of opioid withdrawal and can stand in the way of successful recovery. But a clinical trial, conducted by an Emory-Georgia Tech team, might make a difference. The trial is testing whether a device that stimulates the vagus nerve can help people with Opioid Use Disorders (OUDs).

The non-invasive, hand-held device is applied at the neck and uses a mild electrical stimulation that passes through the skin to the vagus nerve. It has been approved by the U.S. Food and Drug Administration to treat migraine and cluster headaches, as well as posttraumatic stress disorder.

The clinical trial, led by J. Douglas Bremner, MD, in the Departments of Psychiatry and Radiology and director of the Emory Clinical Neuroscience Research Unit at Emory University School of Medicine, and Omer T. Inan, PhD, at Georgia Tech School of Electrical and Computer Engineering and



**J. DOUGLAS BREMNER**

the Coulter Department of Bioengineering, received a UH3 grant from the National Institute on Drug Addiction.

This trial follows a pilot study by Bremner and Inan that showed transcutaneous cervical vagus nerve stimulation (tcVNS) reduced both the psychological and physiological symptoms of acute opioid withdrawal.

The double-blind, randomized, sham-controlled study funded by the UH3 grant is recruiting approximately 100 patients with OUD. It will be measuring reductions in subjective withdrawal, craving, pain, and distress, as well as physiological markers such as heart rate.

“By helping participants through the acute withdrawal period, we hope this can play a role in long-term recovery from OUDs,” says Bremner. ■



**STUDY INFORMATION**  
Danner Affadzi  
rdweeks@emory.edu

*This hand-held device is made by gammaCore™, a commercial-stage bioelectronic medicine company.*

**DONOR SPOTLIGHT**

**Community of donors**

Many individuals worked to make the new Emory Addiction Center possible, but significant support came through the efforts of three friends: Frank Boykin, Mohawk Industries chief financial officer; Tom Johnson, former CNN chief executive officer; and Edward “Jack” Hardin, a partner with Smith Gambrell Russell, LLP.

Frank and Karen Boykin’s family has been directly affected by addiction. “Our son, Stephen, became addicted to opioids,” Frank Boykin said. After years of treatment in various clinics, Stephen finally received medication-assisted treatment at

a Hazelden Betty Ford Clinic in California that worked, and he has been in recovery for five years.

Grateful, Frank Boykin reached out to Johnson, who reached out to Hardin. Together, they enlisted colleagues in the business community.

“I’ve worked for a long time to combat homelessness,” Jack Hardin said. “About one-third of those experiencing homelessness have substance use disorders. So I understood the problem and was willing to help.”

Hardin gives Johnson the bulk of the credit. “A broad coalition was

assembled mostly through Tom’s effort,” he said. They reached out to the Hazelden Betty Ford organization, which wanted to partner with an academic research institution.

“We immediately thought of Emory, which offers world-class research and the Emory Brain Health Center,” Johnson said.

Hardin, Johnson, and Boykin aren’t finished. “I am focusing my attention on potential donors who can help us create more capacity to treat the medically indigent,” Hardin said. “I also want to see a future phase that involves residential treatment.”





**Project ARROW & PSTAR Clinic**

Psychosis is a serious mental condition in which a person experiences an altered sense of reality. It can happen in periodic episodes or persist as an ongoing mental illness.

The Emory Department of Psychiatry and Behavioral Sciences studies and treats psychosis through community outreach programs with the Grady Health System. Whether someone is experiencing a first episode of psychosis, or trying to manage persistent symptoms of schizophrenia, the programs provide evidence-based care focused on recovery.

Here are two of those programs.

**Project ARROW**

Psychotic episodes are frightening not only to the person experiencing them, but to everyone around that person too.

Rusty Gilbert says he’s been there, as both the parent of a child suffering from mental illness, and as someone with a mental illness diagnosis himself. Gilbert now uses his life experience to help others — as a certified peer specialist, or CPS, for the Project ARROW program (Achieving Recovery through Resilience, Optimism, and Wellness).

“I’ve trained my whole life for this,” Gilbert says.

Gilbert is on one of the coordinated specialty care teams that see young people,

**“Recovery from psychosis is possible. We have seen many people get back to work, school, relationships, and get on with their lives.”**

**—ROBERT COTES**

*Rob Cotes and Rusty Gilbert*

ages 18-30, who are experiencing a first episode of psychosis. Psychotic episodes can start in the late teens or twenties, when a young person’s brain is still developing, and can include hallucinations, delusions, and bizarre behavior. It happens to about 100,000 young people each year, according to the National Institute of Mental Health.

Robert Cotes, MD, director of Project ARROW, says the program provides early intervention which can be life-altering. “Recovery from psychosis is possible. We have seen many people get back to work, school, relationships, and get on with their lives.”

Cotes says that a diagnosis of psychosis can create confusion for both the individual and the family. “Our agenda is not necessarily to convince someone they have psychosis. We take a recovery-oriented approach, we help people identify their goals and help them get to their goal.”

The program started in 2019 and very quickly filled up. A participant can meet with a psychiatrist, nurse, therapist, case manager, employment/education specialist, peer specialist, and peer family specialist, like Rusty Gilbert. Cotes says there’s a huge need for services like these.

“The mental health system can feel hierarchical — people are given instructions, told to do this or that. We try to minimize that structure as much as possible and empower people.”

Gilbert goes out into the field and meets people where they are. He shares his personal experiences grappling with mental illness, including his own diagnosis of childhood trauma. He’ll help a patient through a doctor’s appointment, or with family dynamics, or connect to support services.

“I want you to see your future the way you want to see it and start working toward it,” he says.

**PSTAR Clinic**

Treatment resistant schizophrenia is disabling and difficult to treat. Clozapine is the only medication approved by the FDA for this illness, but it’s a complicated medicine to use and prescribers can be hesitant to use it.

The PSTAR Clinic (Persistent Symptoms: Treatment, Assessment and Recovery) started in 2012 to focus on the safe and effective use of clozapine. The Clinic provides recovery-oriented care, particularly in the use of clozapine, for individuals with persistent symptoms of psychosis. A critical objective of the clinic is educating trainees and psychiatrists in the community about how to use clozapine effectively.

Director of PSTAR, David R. Goldsmith, MD, says clozapine can help a significant number of people with schizophrenia. “We work closely with our patients to help them meet their goals, whether that’s with clozapine or other treatments.”

The clinic also plays an important role in integrating research with clinical care. Goldsmith leads studies investigating the impact of inflammation on motivational deficits and negative symptoms in patients with psychosis. Robert Cotes, MD, leads clinical trials that focus on treatment options for psychosis, including clozapine, other antipsychotic medications, and non-pharmacologic options. ■

**PROJECT ARROW**  
[gradyhealth.org/arrow](http://gradyhealth.org/arrow)

**PSTAR CLINIC**  
[gradyhealth.org/care-treatment/behavioral-health-center](http://gradyhealth.org/care-treatment/behavioral-health-center)



**We work closely with our patients to help them meet their goals.”**

**—DAVID R. GOLDSMITH**





**EUPI**

The Emory University Psychoanalytic Institute (EUPI) trains psychiatry and psychology residents, graduate students in PhD programs, and mental health professionals in the rigorous study of psychoanalysis — an intensive form of psychotherapy that delves into the unconscious forces behind human behavior. Stefanie Speanburg, PhD, director of EUPI, says this comprehensive training is about “what

makes us human and how minds develop over the course of the human lifecycle.”

There has been a strong psychoanalytic influence in the Emory Department of Psychiatry since its beginning in 1958. EUPI stands out as one of two remaining North American psychoanalytic institutes situated within a department of psychiatry. Its Core Program is recognized for its innovative, interdisciplinary curriculum and clinical excellence.

**“Youth are facing a mental health crisis and there are not enough of us to help.”**

— BEVERLY J. STOUTE

Speanburg says that the EUPI was one of the first institutes to incorporate courses about sexualities and gender into its curriculum, thanks to Ralph E. Roughton, MD, a former director of the EUPI. In 1996, Roughton was the first openly gay Training and Supervising Analyst recognized by the American Psychoanalytic Association (APsaA), and he became the first chair of APsaA’s committee to address homophobia, heterosexism, and misogyny within psychoanalysis.

Roughton set the tone for exploring contemporary issues in the EUPI curriculum. More recently, Beverly J. Stoute, MD, EUPI Training and Supervising Analyst and co-chair of the Holmes Commission on Racial Equality in the APsaA, has brought awareness of racial bias in mental health care delivery into the curriculum.

Stoute, a child, adolescent, and adult psychiatrist and psychoanalyst, has written extensively on the effects of culturally-embedded racial bias from a developmental perspective. She launched a course on race in the EUPI in 2015, the first of its kind in the department. It quickly became a staple of the psychoanalytic training offered at Emory. She credits EUPI with fostering a pluralistic outlook and an interdisciplinary analytic community.

Today, Stoute says there’s an even greater need for courses like this and for resources to treat children and adolescents who grapple with these issues. In addition to her EUPI position, Stoute has a private practice in Atlanta for both adults and children: “Youth are facing a mental health crisis and there are not enough of us to help,” she says.

Stoute advocates integrating issues of race, gender, sexual orientation, class, ability — “inclusion and diversity” — into all aspects of health care and education. “Medical care has fractionated into specialties, but we can’t teach things in pieces. We need integration.” The secret to implicit bias, she says, is that it’s structurally embedded.

“Diversity is a mindset, it isn’t one thing or one idea. How do you integrate it into other areas? Trauma, group psychology,



**“A psychoanalytic perspective appreciates a human’s profound ability to adapt and cope with vulnerability, trauma, and adversity against the odds.”**

— STEFANIE SPEANBURG

and group dynamics are fundamental in understanding racial issues.”

The EUPI has grown through support from Catherine Shropshire Hardman, including a new facility that contains state-of-the-art technologies, a special-collection library, and clinical offices. Thanks to her support, the Catherine Shropshire Hardman Symposium was created as an opportunity for clinicians, researchers, scholars, and advocates to engage one another in interdisciplinary dialogue on current mental health topics. She has also supported the EUPI Philanthropy Fund, which gives Atlanta community clinicians monthly seminars on contemporary psychoanalytic concepts relevant to their work.

Both Stoute and Speanburg would like the EUPI to continue to grow. Stoute sees opportunities to engage the Atlanta community and make psychoanalytic training available for community health clinicians. Speanburg feels clinicians at all stages of their careers can benefit from psychoanalytic training.

“A psychoanalytic perspective appreciates a human’s profound ability to adapt and cope with vulnerability, trauma, and adversity against the odds,” Speanburg says. ■

**EMORY UNIVERSITY PSYCHOANALYTIC INSTITUTE (EUPI)**  
[med.emory.edu/departments/psychiatry/education/eupi](http://med.emory.edu/departments/psychiatry/education/eupi)

**CLINICAL PROGRAMS**

For a complete list of the department’s clinical programs, go to [med.emory.edu/departments/psychiatry/programs](http://med.emory.edu/departments/psychiatry/programs).



## LEADING THROUGH EDUCATION

The value of an Emory Department of Psychiatry and Behavioral Sciences education shines through its teachers and through graduates who are using their training to understand and surmount today's mental health problems. Here are just a few of those educators and the next generation of mental health experts trained by Emory.



### BENSON KU

On his first official day on the Emory psychiatry faculty, Benson Ku, MD, started implementing a K23 award from the National Institute of Mental Health (NIMH) for studying the social determinants of schizophrenia. A K23 award is for career development; the funding provides “protected time” for doctors to pursue an independent clinical research career.

Ku submitted the award proposal while he was still an Emory PGY3 resident, rotating through the Grady Memorial Hospital floor that treats patients with serious

mental illnesses, such as schizophrenia and bipolar disorder.

“I have learned so much listening to my patients describe their living situations. It has opened my eyes to how patients’ mental health can be shaped by various social, economic, and physical environments. I now ask my patients about their neighborhoods to better understand their social circumstances and what might be contributing to their psychosis risk and social functioning,” said Ku.

Benson Ku credits both his clinical training and the multidisciplinary nature of his education. Mentors from across several schools and departments at Emory were important, particularly Andrew Miller, MD, in the Department of Psychiatry and Behavioral Sciences, Benjamin Druss, MD, MPH at the Rollins School of Public Health, and his primary mentor on the NIMH award, Elaine Walker, PhD, in the Department of Psychology, who helped him understand risk from a neurobiological perspective.

Ku’s research focuses on the impact of neighborhood characteristics on neurobiology and risk of psychosis. He says the pandemic offered the unique opportunity of glimpsing a patient’s home via telemedicine appointments. He observed first-hand the social impact of neighborhood conditions, schools, and communities on youth with early psychosis.

Ku says his own background also inspires his research; he grew up poor in Queens, New York and not engaged with his own education. Community support turned that around for him, resulting in a scholarship to Columbia University for an undergraduate degree: “Even though I come from a disadvantaged background, community and social support have been essential to my success.”

Ku says he’s motivated to understand the potential for community interventions to prevent mental illness. He is currently an attending psychiatrist on the Project ARROW Team at Grady. ■



### W. EDWARD CRAIGHEAD

W. Edward Craighead, PhD, began training graduate students in clinical psychology at the beginning of his career and subsequently served as director of doctoral programs at multiple universities. At Emory, he launched the Child and Adolescent Mood Program (CAMP) in 2007, and soon discovered that it was an ideal setting to train Emory’s PhD students in child and adolescent psychology. He and his wife, Linda Craighead, PhD, director of clinical training in Emory’s psychology doctoral degree program, developed a fully-affiliated and nationally-accredited internship where doctoral students could receive training in clinical practice and research.

“Interns get real evidence-based clinical training from people who are conducting research. It’s a complete interface of research and practice so everybody is involved in both,” Craighead said.

He stresses the importance of simultaneous training in research and practice as they inform each other. Published research from CAMP’s programs has provided data for National Institutes of Health grants to support additional research while also fueling clinical practice with additional evidence.

CAMP interns, known as Fuqua Scholars, avert the national match and away internship, which saves them the major expense of interviews and relocation. As a result, Fuqua Scholars tend to finish their degrees in five years rather than six.

“As a program for children, we support families,” Craighead said. “My wife and I raised four children ourselves.” He takes pride in sharing that all told, CAMP faculty have 18 children under age 10.

Training clinicians is where Craighead feels he makes the biggest impact. While he can influence bringing the latest research into clinical practice for the benefit of the estimated 1,500 patients CAMP sees each year, that reach is made exponential by teaching.

“I’ve probably seen five thousand patients over my career, but that’s a relatively small number compared to people who are helped by people I’ve trained or by people who they have trained.”

In addition to overseeing the Fuqua Scholars program, Craighead holds the J. Rex Fuqua Endowed Chair. ■





“Psychiatrists are in short supply nationwide... There’s a great need for them in the community and at the VA.”

## WALID NASSIF

Growing up in war-torn Lebanon, Walid Nassif, MD, starting teaching to earn extra money during medical school. He’s been teaching ever since.

Now a faculty member of psychiatry and behavioral sciences at Emory and in his multiple roles as lead psychiatrist and clinical site director at the Atlanta Veterans Affairs Medical Center (VAMC), Nassif makes the administrative side of his work an active, hands-on teaching role by delivering lectures, taking trainees on rounds, bringing students in on interesting cases, and designing new programs.

Nassif says he never tires of thinking and talking about psychiatry. “It prompts you to think existentially, think philosophically, about who we are, why we believe what we believe, and how you decide when those beliefs stray from truth and reality,” said Nassif.

Nassif is currently co-developing an innovative mental health curriculum for training psychiatric nurse practitioners and physician assistants at the VA. Using the real-life problems of patients at the VA, trainees will learn how to address their mental health needs, such as substance use, trauma recovery, and aging.

Nassif already invites nurse practitioners (NP), physician assistants (PA), and clinicians of other disciplines to attend his noon lectures for medical students. Multidisciplinary training, he says, may improve professional relations in the clinic and relations between families and providers. “When nursing staff understand why physicians make a particular decision about a patient, for example how you reach a conclusion to hold a patient against their will, this can eliminate a lot of friction.”

He hopes the newly-minted mental health professionals will help address a nationwide shortage of mental health providers. “Psychiatrists are in short supply nationwide and there’s been a shift to fill some positions with providers such as NPs and PAs. There’s a great need for them in the community and at the VA.” ■

## NATALIE WATSON-SINGLETON

“Folks who get involved with Nia wind up staying with Nia in some capacity.”

The Nia Project is an Emory@Grady program that provides critical mental health services to traumatized women in the Grady Health System. Nia’s mission is to empower African American women survivors of abuse who have a history of suicidality or intimate partner violence.

Natalie Watson-Singleton, PhD, first worked with the Nia Project as an Emory predoctoral intern, then as an Emory postdoctoral fellow, and is now the Nia Diversity and Inclusion Education Director. Watson-Singleton says her increasing involvement grew out of her interest in cultural factors that affect African American women’s attitudes to mental health services.

“When I got to Nia, it was about taking that interest and fine tuning it with the population at Nia, women who are actively seeking mental health services because of intimate partner violence, childhood abuse, suicide, etc.”

Watson-Singleton sought to understand how trauma and cultural factors, particularly race-related stress, interact to influence health disparities, and whether mind-body interventions could increase this population’s use of mental health services.

She was particularly interested in taking the concepts she was learning in the classroom and putting them into practice.



One lesson she learned, she says, was the importance of developing cultural competency with Black women with different backgrounds and experiences from her own.

“I identify as a Black multiracial woman. I’m not from the South, have not experienced intimate partner violence, did not grow up in poverty. Just because I have these shared racial and gender identities, I still needed to be mindful of all the things that make us different.”

Watson-Singleton is now on the Psychology Department faculty at Spelman College in Atlanta, a women’s college that’s the number one ranked historically Black college in the country, where she developed a practicum course for undergraduates to learn by working at Nia. She formally launched the course in 2017 and now six to eight students participate in it per semester.

She teaches and continues her research into culturally-modifying mind-body interventions to increase African Americans’ use of mental health services and reduce adverse health outcomes for Black communities. ■

“I identify as a Black multiracial woman. I’m not from the South, have not experienced intimate partner violence, did not grow up in poverty. Just because I have these shared racial and gender identities, I still needed to be mindful of all the things that make us different.”

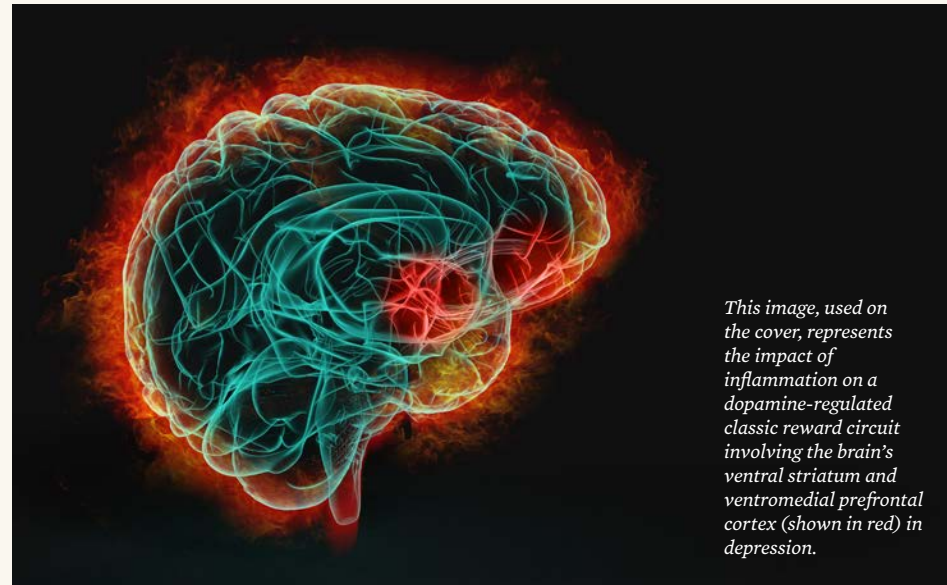
## EDUCATION PROGRAMS

[med.emory.edu/departments/psychiatry/education](https://med.emory.edu/departments/psychiatry/education)



# RESEARCH SEEKS ANSWERS

Researchers ask what's happening in the brain that leads to mental disorders, whether it's the effects of long-term trauma, the neurobiology of depression, or the molecular mechanisms underlying schizophrenia. There are many investigators in the Department of Psychiatry and Behavioral Sciences pursuing these questions. Here are the stories of four of these researchers.



*This image, used on the cover, represents the impact of inflammation on a dopamine-regulated classic reward circuit involving the brain's ventral striatum and ventromedial prefrontal cortex (shown in red) in depression.*

## The Inflamed Brain

Anhedonia — an inability to experience pleasure — is a core symptom of depression that is difficult to treat. Research by Jennifer Felger, PhD, and colleagues in the [Emory Behavioral Immunology Program](#), indicates that high levels of inflammation may contribute to anhedonia by interfering with the neurotransmitter dopamine. About a third of depressed people have high levels of inflammation.

In imaging studies, Felger's team has shown that the brains of depressed people with systemic inflammation display a "failure to communicate" between regions important for motivation and reward processing. These regions are the ventral striatum and the ventromedial prefrontal cortex, marked in red in the illustration.\*

Felger's group recently showed that a one-time challenge with the drug levodopa (L-dopa), which increases the availability of dopamine, can improve communication between these two brain regions. This improvement in "functional connectivity" only occurred in patients with higher levels of systemic inflammation. It also correlated with reduced symptoms of anhedonia after L-dopa challenge.

L-dopa is often prescribed for Parkinson's disease but is not considered an anti-depressant. Felger's research could guide the selection of existing and novel anti-depressant medications by clinicians.



**"Our findings support the idea that depression with high inflammation may be a distinct sub-form of depression."**

—JENNIFER FELGER

"Our findings support the idea that depression with high inflammation may be a distinct sub-form of depression, characterized by low dopamine, deficits in reward circuit function, and anhedonia," Felger says. "Potentially, functional connectivity in reward circuitry could be used to assess responsiveness to novel treatments targeted to this group."

Felger and [Andrew Miller, MD](#), director of the program, are currently conducting studies examining whether FDA-approved medications that either act on dopamine or reduce inflammation may have special benefit in depressed patients with anhedonia and high inflammation. ■

## Brain Organoids

An organoid is a three-dimensional collection of cells grown in a lab to create a miniaturized version of an organ. Neuroscientists are breaking new ground in research with "brain organoids," sophisticated models of the human brain. Zhexing Wen, PhD, a pioneer in developing brain organoids, has established the [Laboratory for Neurobiology of Psychiatric Disorders](#) at Emory to build on the technique.

Brain organoids can be formed using a patient's own cells, allowing researchers to study the specific factors that contribute to a disorder in that individual. The organoids are derived from stem cells, which come from skin cells that are reprogrammed to become brain cells.

Wen and colleagues study the molecular mechanisms underlying neuropsychiatric disorders such as schizophrenia, major depression, and autism spectrum disorder. They have used brain organoids to better understand the neurobiology of fragile X syndrome, the most common inherited form of intellectual disability and a leading single-gene cause of autism. They are also

*Microscope image of fragile X human brain organoids, courtesy of Zhexing Wen. Green represents cytoplasmic Nestin while red represents nuclear Sox2; both are markers for neural progenitor cells.*

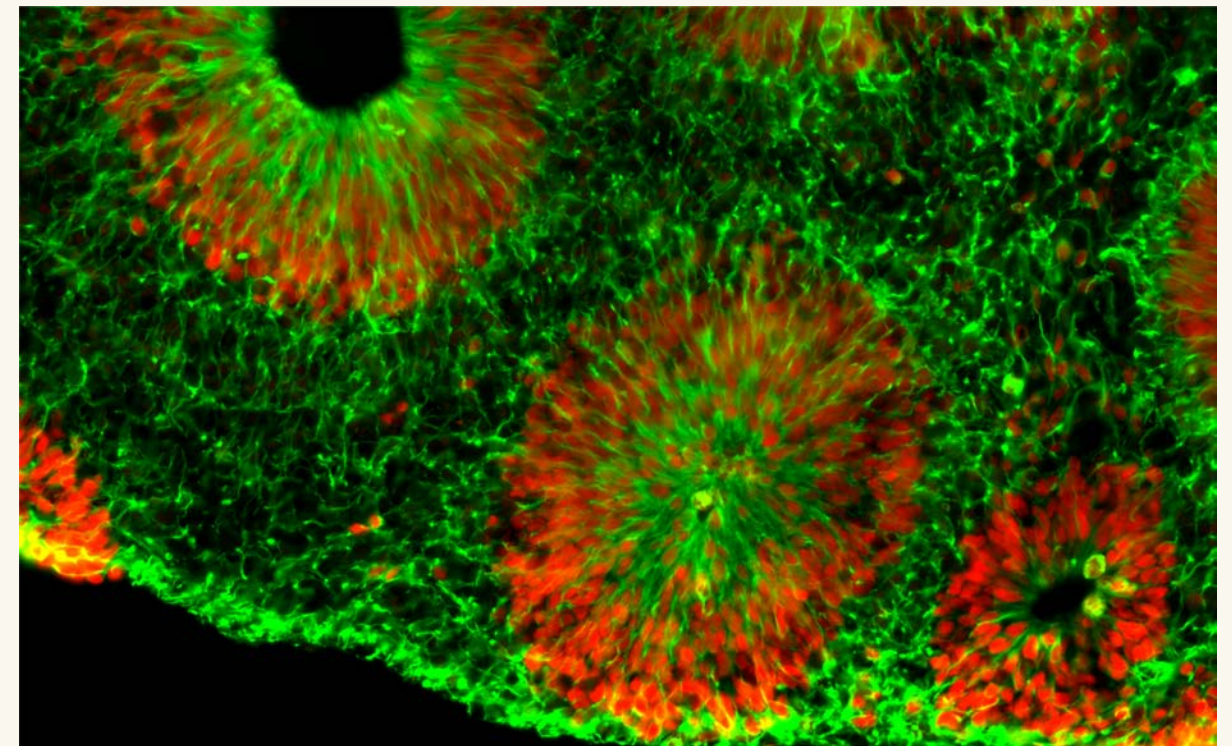


**"Organoid techniques could allow us to dissect genetic variants and effects specific to cell types, which was not possible before."**

—ZHEXING WEN

using organoid models to study metabolic distortions in schizophrenia and the genetic architecture of Alzheimer's disease.

"For both of these disorders, organoid techniques could allow us to dissect genetic variants and effects specific to cell types, which was not possible before," Wen says.



Fragile X syndrome comes from the silencing of a gene, FMRI, which plays a critical role in regulating protein synthesis in brain cells. Affected children can have intellectual disability, delayed milestones, and display autism-like features, such as impaired social skills and repetitive behaviors.

In a 2021 paper published in *Nature Neuroscience*, Wen and his colleagues showed that a human brain organoid model of fragile X syndrome matches molecular and pharmacological aspects of the disorder more closely than mouse versions. Compared with controls, the changes in brain cell development were "more pervasive" than in mouse models.

"Differences we observed could be some of the reasons why previous clinical trials were not successful," Wen says.

Wen says brain organoid models give researchers more confidence in planning clinical trials. The next step? Assembloids — putting miniature parts of the brain together so they can talk to each other. ■





## The Female Brain and Trauma

What makes the female brain different from the male brain? What underlying mechanisms put women more at risk for long-term effects of stress and trauma exposure?

Two co-directors of the [Grady Trauma Project \(GTP\)](#) are tackling these provocative questions in their respective research areas in their quest to understand why women are twice as likely as men to develop posttraumatic stress disorder (PTSD) after a traumatic experience.

Vasilki Michopoulos, PhD, a Core Scientist at the [Emory National Primate Research Center](#), has been examining the issue by studying rhesus macaques; she also examines the issue by studying trauma-exposed people in her role as director of translational neuroscience at the GTP. Her team's findings may have implications for both behavioral and pharmacological interventions.

"I've come to appreciate how our past experiences leave lasting biological marks," says Michopoulos.

In women who have experienced trauma, PTSD symptoms tend to vary over the course of the menstrual cycle. Together with estrogen's known effects on brain and behavior, this has suggested that the endocrine system can explain part of the difference.

Estrogen may influence the development of PTSD by modulating the activity of brain regions involved in the stress response and by regulating the release of stress hormones. "My goal has really been to understand both chronic stress and trauma's effects, with a focus on women's health and health inequities," says Michopoulos.

Research has shown that macaques form hierarchies when living together in groups. The dominant monkeys intimidate and harass the subordinate ones.

"It's not a model of PTSD, but rather, chronic psychosocial stress," Michopoulos



"I've come to appreciate how our past experiences leave lasting biological marks."

—VASILKI MICHOPoulos



"Predictive tools, biomarkers or biosignatures, would help us initiate early intervention that could prevent an individual from developing the debilitating symptoms of PTSD."

—JENNIFER STEVENS

says. "Monkeys can be just as nasty to each other as humans."

In this setting, experimenters can manipulate social rank as well as assessing the effect of the high-fat diet common among humans in Western countries. Michopoulos and colleagues at [Emory National Primate Research Center](#) have been able to show that estrogen's protective effects diminish in monkeys of lower social status – an insight valid for both non-human primates and humans.

Michopoulos also studies the effects of changes in hormone levels during pregnancy and perimenopause on fear and anxiety responses in women who have experienced trauma and other life stressors. She and Jennifer Stevens, PhD, director of human neuroscience at the GTP, are collaborating on a study of fluctuating hormone levels in women with PTSD.

The team is now testing the possibility that fluctuating hormone levels during pregnancy, perimenopause, or over the course of the menstrual cycle contribute to PTSD symptoms. Several ovarian hormones have beneficial effects on brain function and help with learning and memory. When hormone

levels change quickly, the brain must adapt; Michopoulos and Stevens predict that this may increase memory and anxiety-related symptoms in women with PTSD.

Stevens uses neuroimaging to address the issue of women having higher rates of PTSD than men. She led a longitudinal multisite study that evaluated participants recruited from emergency departments across the U.S., to identify early biosignatures of PTSD vulnerability. Stevens says this was important because it's been difficult to predict who will suffer long-term dysfunction from trauma.

"Predictive tools, biomarkers or biosignatures, would help us initiate early intervention that could prevent an individual from developing the debilitating symptoms of PTSD," she said.

Building on results showing individual variability in PTSD susceptibility, Stevens, Michopoulos, and their Emory colleagues embarked on a GTP study to examine possible biological risk factor differences between women and men. Researchers used MRIs to gather data on emergency department patients at [Grady Memorial Hospital](#) who had experienced a traumatic event. They found sex-based differences in three areas in the brain critical to emotion and fear response, which correlated to the significantly higher PTSD symptom severity in females than in male participants.

Black and African American women who receive their healthcare at Grady are at high risk for trauma and have experienced societal and racialized stressors as well. During their conversations with over 7,000 women at Grady, the GTP team has observed that these stressors contribute to high rates of PTSD and depression diagnoses.

Both Stevens and Michopoulos obtained their doctoral degrees at Emory. Their explorations into neurobiological risk factors for PTSD came together in their research on the impacts of stress and trauma on women.

For more on the [Grady Trauma Project](#), see "[Confronting Trauma](#)," page 10. ■

## LABS AND PROGRAMS

The Department of Psychiatry and Behavioral Sciences conducts a wide range of research and ranks 16th nationally in National Institute of Health dollars. Its world-renowned programs focus on research in depression, anxiety, PTSD, schizophrenia, substance abuse, and public health.

### LABORATORIES

- [Emory Clinical Neuroscience Research Unit \(ECNRU\)](#)
- [Fani Affective Neuroscience Laboratory](#)
- [The Emory Behavioral Immunology Program](#)
- [Laboratory of Neuropsychopharmacology](#)
- [Laboratory for Darwinian Neuroscience](#)
- [Laboratory of Social Neurobiology](#)
- [Laboratory for Neurobiology of Psychiatric Disorders](#)
- [Stress and Neuromodulation Laboratory](#)

### RESEARCH PROGRAMS

- [Treatment Resistant Depression](#)
- [Emory Behavioral Immunology Program](#)
- [Women's Mental Health Program](#)
- [Child and Adolescent Mood Program \(CAMP\)](#)
- [Grady Trauma Project](#)
- [Nia Project](#)
- [The Center for Translational Social Neuroscience](#)



# GIVING BACK

Since its founding in 1958, the Emory Department of Psychiatry has grown exponentially by adding clinical services, educational programs, and research.

Much of this growth has been fueled by philanthropy. Our donors include foundations and individuals who share our vision of seeking creative solutions to the pressing needs of mental health today.



They give in many different ways. Some donors, like J. Rex Fuqua and family, carry on a family legacy of giving through donations and endowed chairs (see page 8). Other philanthropy has come about through the coordination of public and private community partners to benefit a particular project (see the [Emory Addiction Center](#), page 18).

Several philanthropists with long histories of giving, including John and Mary Brock, the Wilbur & Hilda Glenn Family Foundation, and H. Lamar “Mickey” Mixson, have shown a strong commitment to providing support to the Emory Child and Adolescent Mood Program (CAMP). CAMP offers a range of clinical programs to address mental health difficulties in children and young adults, such as depression, bipolar disorder, and anxiety disorders. Their support enables the research and specialized training needed to treat young people.

Another model of philanthropy is exemplified by Catherine Shropshire Hardman, whose support has touched virtually every area within the Emory Department of Psychiatry. Her thoughtful giving has supported the research of early- and mid-career scientists. She has funded facilities such as the Catherine Shropshire Hardman Brain Health Suite. And she has established endowed funds that support ongoing programs, key staffing positions, and training both within the university and the community.

“Brain health deserves far more attention,” she says. “We need to reduce stigma associated with brain disease.”

Since 2017, she has chosen to support both the [Emory Brain Health Center](#) and the [Department of Psychiatry and Behavioral Sciences](#) because of Emory’s holistic approach to treatment that includes psychiatry, neurology, neurosurgery, rehabilitation medicine, and sleep medicine. She is particularly interested in research on anxiety, trauma, addiction, autism, and dementia.

*Tom Johnson, William Cope Moyers, Frank Boykin, and Jack Hardin at the opening of the Emory Addiction Center, made possible by the Addiction Alliance of Georgia.*



*Above: Duvall and Rex Fuqua with Rex’s parents, J.B. Fuqua and Dorothy “Dottie” Fuqua, in 2003.*



*Left: Catherine Shropshire Hardman*

“There’s not enough knowledge about these conditions, and so many families are affected by them,” she says. “Investing in Emory allows me to help others in a purposeful way.”

Mrs. Hardman’s philanthropy is helping develop a new program that will assess and treat anxiety disorders over the lifespan, from children to older adults. In addition, her support has funded a new physical space for the [Emory University Psychoanalytic Institute \(EUPI\)](#) and she continues to provide operating support to the EUPI through scholarships for new psychoanalytic candidates.

“The department owes a tremendous debt to Catherine Hardman,” said William M. McDonald, MD, chair of the Department of Psychiatry and Behavioral Sciences. “Mrs. Hardman has been a loyal supporter as well as a driving force behind so many of our efforts. With her help, we are able to conduct research, teach, and develop and implement new treatments while we continue to discover more about the intricacies of the brain and of brain-related diseases.” ■

## MAKE YOUR GIFT

For information on making a gift, go to [med.emory.edu/departments/psychiatry/donate.html](https://med.emory.edu/departments/psychiatry/donate.html).

Or contact Phyllis Rosen, LCSW, at [prosen@emory.edu](mailto:prosen@emory.edu) or 404.727.8254.



AN INNOVATIVE STORYTELLING  
PARTNERSHIP BETWEEN  
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BROADCASTING

# YOUR FANTASTIC MIND

“Your Fantastic Mind” is an Emmy-winning PBS television series partnership between Emory Brain Health and Georgia Public Broadcasting.

In national syndication, the news magazine-style show has aired in over 200 television markets and 43 states in the U.S. and has received seven Emmy Awards.

Reporting on pioneering science and clinical advances in brain health, “Your Fantastic Mind” features stories and experts from various sources in the Emory Department of Psychiatry and Behavioral Sciences.

## Highlights from psychiatry-related episodes in the first four seasons



### ADOLESCENT MENTAL HEALTH

Social media, academic stress, and other crucial factors are contributing to an adolescent mental health crisis in America. This episode explores the alarming rise of anxiety, depression, and suicide among today's teenagers, addressing causes of the crisis and exploring possible solutions.

[Watch Now](#)



### DEPRESSION

Millions of Americans have depression, but for some it is persistent and increases the risk of suicide attempts. This episode tracks the journey of a patient who has endured debilitating treatment-resistant depression for a decade, as he has deep brain stimulation surgery to reclaim his life.

[Watch Now](#)



### NIA PROJECT

The Nia Project is highlighted in a segment for its research and treatment-based program, empowering African-American women survivors of abuse experiencing suicidal thoughts.

[Watch Now](#)



### THE OPIOID CRISIS

This episode documents the roots of the opioid crisis in Georgia and addresses the latest information about the increase in addiction rates and overdose deaths during the COVID-19 pandemic.


[Watch Now](#)



### GRADY TRAUMA PROJECT

This segment features the Grady Trauma Project studying civilian trauma, focusing on post-traumatic stress disorder and the clinical and physiological implications of trauma exposure.

[Watch Now](#)



VISIT THE “YOUR FANTASTIC MIND”  
WEBSITE TO STREAM FULL EPISODES  
FROM PAST AND CURRENT SEASONS

[emoryhealthcare.org/your-fantastic-mind](https://emoryhealthcare.org/your-fantastic-mind)



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