About

The Emory Postdoc Science Writers Magazine is a bi-annual publication. It is written and edited by postdocs for everyone. The goal of our magazine is two-fold: 1) To highlight research being done here at Emory University as well as in collaboration with other Atlanta area research institutions, and 2) To provide an avenue for those in the postdoc community to be practiced in the art of science writing for a general audience. We in the Science Writers Committee hope you are inspired by these pieces and welcome contributions and editorial services for future issues.

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Dear Readers,

We are proud to publish the Fall 2019 Edition of the Emory Postdoc Science Writers Magazine!

As postdocs, many of us struggle with issues of mental health. Unfortunately, conversations about mental illness are still taboo in many private and professional environments. We fear judgment from our co-workers, ridicule from our superiors, and indifference from our friends and family. We must not be afraid to talk about issues with our mental health. After all, we wouldn’t tell an individual with a broken arm “It’s all in your head!” would we? True to this endeavor, we have requested several postdocs to contribute articles that revolve around this theme.

The inspiration for these pieces stemmed from both personal and professional experiences. As a result, the collection of articles presented in this edition touches on a variety of areas within the mental health arena.

A few of our writers wanted to focus on emerging technologies for the identification, quantification, and treatment of mental disorders. This exciting research is taking place both here at Emory and across town at Georgia Tech. Moreover, some of this work is looking into the possibility that our brains are impacted greatly by other biological phenomena happening within our bodies.

One of our writers was intrigued by the mental gymnastics that so many undertake as they become entrenched in their own opinions and defiant toward new information. She focused specifically on parents and their vaccination decisions, but the article can be readily applied to many other situations we as scientists find ourselves in as we try to educate our fellow humans and ourselves or correct misinformation.

Finally, we had writers who were very interested in writing about mental health in academia. Academia is certainly a place where the seemingly endless list of responsibilities coupled with often relentless pressure can take its toll. It is unsurprising that the topic of mental health resonated so strongly with our postdoc writers. Importantly, the issue of mental health in academia is a topic that has garnered increasing attention over the past few years. Hopefully this means new mechanisms will be put in to place to emphasize the value of reducing our mental loads and embracing coping mechanisms.

Kim & Nav, Science Writers Magazine Co-Chairs
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Brain stimulation for dealing with depression: A promising resort when antidepressants and psychotherapy fail

Clinical depression is a mental disorder characterized by persistent symptoms such as sadness and loss of interest in activities. Antidepressants are considered the first-line treatment for depression and are, in fact, the second-most prescribed drug in the United States. Antidepressants are medications that may relieve the symptoms of depression by rectifying the imbalances of neurotransmitters in the brain that are associated with mood and emotion. However, among the 30 million Americans who are suffering from depression, nearly one third of them failed to extricate themselves from a depressive disorder with antidepressants [1]. This type of depression is usually referred to as treatment-resistant depression (TRD). In these cases, symptoms persist or reoccur despite a standard regimen of antidepressants or psychotherapy. Therefore, there is an unmet need in the standard of care to help these patients gain full remission of symptoms. Fortunately, research into alternative approaches to depression treatment is ongoing. One area of active interest is the use of deep brain stimulation techniques to provide relief for those that do not respond to conventional treatments.

Deep brain stimulation (DBS) is an emerging technique for TRD. DBS is a neurosurgical method that controls brain activity by sending desired electrical pulses through electrodes implanted at the targeted brain area. Although the evidence is not yet strong enough to demonstrate its effectiveness as a therapeutic technique for TRD, DBS has been recognized as an appropriate medical treatment for Parkinson’s disease, essential tremor and dystonia [2]. In fact, Emory University Hospital is one of the largest and oldest centers in the United States that provides DBS surgeries for these disorders. A quick online search about Emory University's involvement with DBS studies in the past 15 years reveals a recent sharp increase in the prevalence of this technique. Among all the relevant scientific publications from Emory labs, nearly 20% came out in 2018 or 2019. To advance DBS as a viable option for TRD, several research groups at Emory have been focusing on the optimal targeted region for simulation. As one might expect, the precision of targeted region and stimulation resolution directly influence the efficacy of DBS treatment. A concerted effort from multiple groups at Emory University has demonstrated the potential of subcallosal cingulate white matter fibers, a major component of an anatomic brain circuit involved in emotional processing, as a region for conducting DBS treatments [3-5].

If we widen our view to include our neighboring campus at Georgia Tech, the influence on this effort to revolutionize depression treatment grows. While treatment with DBS has been shown to be effective in some cases of treatment-resistant depression, the treatment requires surgical implantation of electrodes, and so non-invasive therapies are being considered as an alternative to DBS. One such therapy is Transcranial magnetic stimulation (TMS). This technique delivers electromagnetic pulses to targeted regions of the brain, which in turn activates the nerves in the left pre-frontal cortex associated with mood. Emory neurologist Dr. Charles Epstein and former Georgia Tech professor Dr. Kent Davey are pioneers in this technique and have made groundbreaking achievements by introducing the FDA approved technology NeuroStar TMS Therapy® to those who have been battling TRD for years [6]. In the book 3,000 Pulses Later, Martha Rhodes, a cured patient, shared her stories of undergoing major depression treatment by TMS [7].

In addition to treating depression, TMS has also been applied to investigate brain mechanisms. Dr. Dobromir Rahnev, an assistant professor of physiology at Georgia Tech, combines the use of functional magnetic resonance imaging (fMRI) and TMS to investigate brain activities during perceptual decision-making.
processes [8]. This involves another non-invasive procedure to view the inner functions of the brain. 'Entraining' or rhythmically stimulating different areas of the brain provides insight into the functional connections among these regions of interest, which may serve to benefit even more highly targeted TMS applications in future work.

To date, DBS and TMS, along with vagus nerve stimulation (VNS) and magnetic seizure therapy (MST) are the four rising brain stimulation methods for TRD. Each method has advantages and specific use cases. The two methods that use magnetic pulses (TMS and MST) have better spatial resolutions compared to the electrical stimulation methods. However, the higher frequency pulses of MST require anaesthesia during stimulation while TMS does not. On the other hand, both DBS and VNS are invasive, requiring surgical implantation of electrodes in the brain. Although still in the initial stages of development, brain stimulation therapy holds promising potential to be extensively applied to other mental and physical impairments such as Parkinson’s disease and anxiety disorders.

Mental health is of vital interest to the community. As reflected in the studies shown above, it can sometimes take more than pharmaceutical intervention to change the 'behind-the-scenes' workings of our brain. It is important to recognize those at Emory University, Georgia Tech, and other institutions nationwide that devote their time and effort into furthering our state of knowledge, and eventually our state of care.

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**References**


Emory researchers investigate links between the brain, behavior, and the immune system

The invisibility inherent to many forms of mental illnesses makes them challenging to understand and can contribute to the stigma surrounding disorders such as depression and anxiety. However, though mental illnesses may not have easily discernible physical effects on the body, they often have treatable biological symptoms and underlying causes. Researchers in the Behavioral Immunology Program at Emory University are working to better understand and treat the biological causes of behavioral mental health disorders by studying the ways in which interactions between the brain, the environment, and the immune system contribute to depression and other psychiatric disorders.

The Behavioral Immunology Program is comprised of a group of Emory faculty collaborating to conduct clinical and basic research on links between the brain and the immune system. The group is especially interested in the effects of inflammation on various neurotransmitters and neural networks in the brain relevant to behavioral symptoms and common psychiatric and medical illnesses and developing and testing innovative treatments for patients with high inflammation. Jennifer Felger, PhD, is the Laboratory Director for the program, where she works closely with the other leadership faculty, Director Andrew Miller, MD and Associate Director Ebrahim Haroon, MD. Other Emory faculty members in the group include Drs. Michael Treadway, David Goldsmith, Mylin Torres, Jennifer Stevens, Xiangchuan Chen, Canhua Xiao, Zhexing Wen.

In collaboration with other members of the Behavioral Immunology Program, Dr. Felger is leading research to investigate the effects of inflammatory processes on neurotransmitters and neural circuits in the brain in individuals with major depression or medical conditions associated with high levels of inflammation, like cancer. The goal of this work is to better understand how inflammatory processes impart changes to the brain’s structure and function and identify the underlying neural and metabolic pathways. The physical and biological effects of inflammation on the brain can lead to behavioral deficits like anhedonia, a symptom of depression characterized by lack of motivation and the inability to feel pleasure [1-3]. Dr. Felger’s most recent NIH-funded work is focused on evaluating the effectiveness of novel treatment strategies for anhedonia in depression that may reverse the effects of inflammation on the brain. This work will also identify a combination of behavioral and blood biomarkers that can be used to identify and target relevant therapies to patients with depression or chronic medical illnesses.

Postdoctoral Fellow Mandy Bekhbat, PhD, is working with Dr. Felger to evaluate the impacts of anti-inflammatory treatments on the neurocircuitry that underlies fear, anxiety, and emotion regulation. Symptoms of anxiety are common in patients with major depressive disorders, but the biological mechanisms associated with anxiety in depression are not well understood. Dr. Bekhbat is investigating whether the drug infliximab, a tumor necrosis factor (TNF)-inhibitor currently used to treat autoimmune diseases, can be used to reduce symptoms of anxiety by inhibiting inflammation [4]. Dr. Bekhbat’s work is a first step towards developing novel anti-inflammatory and personalized treatment strategies for patients with high inflammation and major depression who are suffering from symptoms of anxiety.

The relationship between the brain, the immune system, and human behavior is nuanced and complex. Although inflammation is not the only pathway to depression, anxiety, or other mental illnesses, the researchers in the Behavioral Immunology program at Emory have contributed to the understanding that inflammatory processes impact the brain to drive specific symptoms that are common to these disorders. Dr. Felger, Dr. Bekhbat, and other researchers in Emory’s Behavioral Immunology program are continuing to learn about the relationships between mental health disorders and inflammat-
ion with the ultimate goal of alleviating suffering associated with psychiatric disorders by developing strategies to understand, limit, and treat the effects of inflammation on the brain.

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References


If you change your mind

Shortly after I moved from Minneapolis to Atlanta, I went to IKEA (serving grad students and postdocs alike since 1943!) to buy an end table. Seemed simple enough! Two hours later, I was still pacing the aisles of the IKEA warehouse, wild-eyed, with golf pencils in my hair. How could there be so many end tables, and why did I have a sudden craving for meatballs? When I finally emerged, clutching an assortment of wood pieces collectively named LUNNARP, the sun had set, and the parking lot was deserted. I sat in my car, listening to ocean sounds and feeling the relief of being done making furniture-related decisions. (I later promised myself I would never go back to IKEA to make any more decisions—a promise I have since broken many times.)

As anyone who has been to IKEA knows, making decisions requires energy, especially when presented with what appears to be endless options. Therefore, we humans prefer to avoid revisiting the decisions we’ve already made. Once made up, a person’s mind is difficult to change. This fact about humans causes a lot of interesting problems. One of the biggest problems is caused by the decision to delay or avoid vaccination—a decision that can be demanding and stressful to make and difficult to reverse once made. Vaccine delay or refusal often seems like willful ignorance and selfishness to vaccine epidemiologists like me. We find it hard to understand why anyone would decide to forgo one of the most successful public health interventions ever. After all, individuals worrying about vaccine safety have already benefited from so many other public health campaigns—the removal of lead from gasoline, fluoridation of water, restaurant inspections. They’ve even benefited, at least indirectly, from vaccines themselves.

For parents, the decision to refuse or delay vaccination of their child is likely complex. Ultimately, this decision is made with input from various trusted sources, including physicians and nurses, other parents, and information on parent-
Scientists who are developing and advocating for vaccines have received years of training to identify whether information is trustworthy. They turn to scientific studies and data for reassurance that vaccines are safe and effective. For individuals without that training, the locus of trust isn’t a scientific paper—it’s a person close to them. Parents who start out as merely questioning the safety or efficacy of vaccines are more likely to know other parents who delayed or refused vaccinations for their child, and they are more likely to seek out health care professionals who do not press the issue of vaccination. Many popular parenting blogs also contain vaccine-hesitant posts and comments. When this environment is the one that is most trustworthy to parents, we begin to see why parents may feel as though their fears are well-founded. We can also begin to see why vaccination might be such a hard decision to make.

Many parents on parenting forums explain how, for them, deciding to vaccinate their child was a decision they agonized over and discussed with their spouse and other trusted individuals, as in this post on Southern Bella’s Ways to Save, a popular parenting blog (referenced in [2]):

“I went back and forth about vaccinations this year. We were planning on it, but then a friend of ours got her family vaccinated and her son got the flu. I know it’s a SMALL percentage that actually get the flu from the vaccine and I’m pro vaccine in other areas, but after talking with my husband we decided not to get it this year” (post from 11/26/2013). [Author’s note: You cannot get influenza from the influenza vaccine].

Once the decision is made, confirmation bias leads parents to identify "information" or "research" that backs up their initial finding. This, in turn, leads to parents decreasing trust in individuals and sources who are advocating vaccination.

So why won’t vaccine-hesitant people just change their minds once they are given better information? Well, public health scientists and psychologists are just now expressing in scientific terms what many of us have already experienced firsthand at Thanksgiving dinner: Telling someone that they are wrong is a great way to make them more certain that they are, in fact, right [3].

If people don’t want to change their minds and taking an adversarial approach to correcting misinformation makes people dig in their heels more, is all hope lost for vaccination efforts? There are a few pieces of good news to consider.

First, although changing your mind is difficult, it is not impossible. In a 2013 study, scientists noted that individuals interviewing candidates for a job did make an initial “snap” judgment of the interviewee, but then continued to supplement the decision with additional information [4]. This supplementation involves several different brain areas: lateral prefrontal cortex, MPC, striatum, and lateral temporal cortex (to name a few), indicating that revisiting decisions is a complex process. But some parents do, in fact, do it! In a 2017 study, Chung et al. reported that some parents decided to vaccinate after having just “thought about it more” [1]. It is possible that being patient with parents who are concerned about vaccine safety and efficacy may allow them more time to “think about it” rather than forcing them into a decision right away.

Second, scientists must remember that information and misinformation about vaccines isn’t a one-to-one delivery process. Information and stories are processed not just by individuals, but by communities as a whole. This process is important, because every time information is shared in this game of cultural Telephone, different aspects may be changed to make them more “intuitive” [5]. This is one reason misinformation about vaccines spreads easily. But it could also be used to spread correct information about vaccines, if delivered in an intuitive and culturally appropriate way, from a trusted source of information. Even individuals with a mildly unintuitive but correct piece of information can change the minds of others in a small group.
However, advocates of vaccines like scientists and health care professionals will need to earn the trust of vaccine-hesitant parents for this to work. They can establish trust, by first establishing common ground: scientists and parents both want the children of the parents to be happy and healthy.

Finally, a big part of public health science is the focus on prevention, before treatment is necessary. It is likely that pro-vaccine messaging would be more easily received by parents if delivered before the parents are inundated with anti-vaccine messaging [6], a large part of which is on the Internet. In this scenario, they don’t have to change their minds about vaccines, because they’re not yet made up. Maybe the provider-patient conversations about childhood vaccines should start with the OB/Gyn, not the pediatrician.

The existing research on changing a person’s mind shows that 1) it’s difficult, 2) it’s possible, 3) yelling rarely helps (even if it seems like a really satisfying idea), and 4) establishing trust is key. We may never live in a world where all people trust and value vaccines, but, since vaccines help everyone, we should all be involved in the effort to encourage vaccination—you never know whose mind you might change.

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References


Stress, depression and anxiety are not alien terms to graduate students, postdocs and researchers around the world [1]. A recent study published in *Nature Biotechnology* by Evans et al. suggests that 41% of STEM graduate students from 26 countries experience anxiety and 39% are depressed [2,3], highlighting a global prevalence of mental health issues among researchers.

Researchers are continually surrounded by many thoughts that may cause emotional and physical exhaustion.

Increasing competition in scientific fields and the pressure to excel and publish research can lead graduate students, postdocs, and faculty to work long hours during the week and on weekends. The pursuit of scientific goals is often unsuccessful and overwhelming, which can create imbalance between a researcher’s professional and personal lives [4]. Moreover, the low pay scale and career uncertainty further compound the stress and increase burn-out rates in researchers [5].

There is not one single solution for all of these issues; however, learning the art of stress management is an invaluable tool to cope with the multi-faceted challenges of academic research. Below are some tips for stress management in addition to resources and support services available on the Emory University campus that may help you cope with stress and excel in your research profession.
Doing exercise regularly is one of the best ways to relax your mind and body. At Emory, you can take advantage of The Woodruff PE Center (WPEC), Blomeyer Health Fitness Center or enjoy exercise at Lullwater preserve.

It is important to talk about your problems with your family members, friends, peers, colleagues or your supervisor. This will help you relieve stress and help them understand your situation and needs. At Emory, you can also take advantage of Faculty Staff Assistance Program.

Meditation helps relieve stress, can positively impact health and can nurture the quality of compassion. Emory offers various forms of free meditation sessions for all belief systems. You can take advantage of Mindfulness Meditation, Compassion meditation and various other meditation sessions available in the campus.

Go easy on yourself and learn the art of taking small breaks throughout the day to refresh yourself. Taking time-off for vacations/trips can be used to recharge and rejuvenate. Additionally, immersing yourself in recreational activities whether it’s listening to music or creating art, reading books, watching a movie or roaming around the city can tremendously boost your mood.

Networking and connecting with professionals in the same field will help you find solutions, new opportunities and learn from others. Emory Postdoc Association is a platform to connect postdocs on campus. It is helpful when building your network and can provide career guidance. Learn more about Emory PDA.

A well-nourished body can cope with stress better, so be mindful of what, when, and how you eat. Don’t skip meals and eat right. Apart from food, adequate sleep recharges and fuels your mind. Learn more about sleep management and stay fresh.

References:

An evidence-based study at Emory University highlights the need for support of graduate student wellness

As awareness about the importance of mental health and wellness increases across occupations, researchers are starting to look inwards into the issues plaguing graduate students. A group of researchers at Emory University and CDC led by Dr. Nadine Kaslow decided to take an evidence-based approach to mental health in academia by conducting a study on graduate students enrolled at Emory University [1]. With a final study cohort of 301 Emory Laney graduate students, the Kaslow group used an Interactive Screening Program with an anonymous questionnaire to assess suicidal behavior, mood disorders, substance use and service utilization amongst graduate students. Over a study period of 2 years, the average PHQ-9 score, a self-reported depressive symptoms measure [2], showed mild depression amongst graduate students, with more than half of the surveyed students reporting irritable behavior, anxiety, nervousness and high stress levels. An alarming 7.3% of respondents reported suicidal thoughts, while an additional 2.3% reported suicidal plans; the latter were also more likely to endorse feeling loneliness, hopelessness and a lack of control over their eating habits. Approximately 10% of the surveyed students had a history of previous suicide attempts and were more likely to report feeling intensely angry. When looking at treatment utilization, 22% of respondents were taking medication and 18.5% were undergoing counseling for mental health issues. These striking numbers represent a concerning snapshot of the mental health picture in academia at a large southeastern university and lends further urgency to the need to address the deteriorating mental health amongst students in academia.

One of the loudest proponents for wellness here at Emory is Dr. Jen Heemstra, an Associate Professor in the Department of Chemistry. Her recent article, entitled “Self-Care Is Not the Enemy of Performance,” provides a refreshing perspective on prioritizing wellness while working towards long-term career goals [3]. Using the student athlete as an example, she draws on powerful metaphors to explain strategies for preventive maintenance, including: Developing healthy habits for managing stress by taking control of your “mental game”; practicing self-care during training by checking in frequently, keeping the plan flexible, and routinely assessing your overall well-being; coping when injured by recognizing when you are injured, seeking help, and ramping back up gradually.

In the age of social media, advocacy for self-care and mental health on platforms such as Twitter has the potential to reach a broad audience, including students in other laboratories in the US and worldwide. Dr. Heemstra’s (@jenheemstra) tweets often discuss mental health amongst graduate students, evoking heartfelt responses and anecdotes. One of her tweets on World Mental Health Day stresses how academia is open to everyone:

“Struggling with depression or anxiety in grad school does not disqualify you from a career in academia. Rather, it means you will be that much more prepared to empathize with and advocate for students once you get there. #WorldMentalHealthDay2019”

Another tweet from last year mentions a striking excerpt from the Heemstra Lab Policy Manual for graduate students:

“Your mental and physical health are by far the most important consideration in all that you do while in our lab. Moreover, success should not come at the cost of maintaining your interests/hobbies or healthy relationships in your life. In fact, you are more likely to be successful if you take care of yourself and give time to the things outside of work that matter to you.”
The entire Heemstra lab manual [4] is a refreshing read that encourages students to take the time they need to prioritize their mental and physical health and to focus on work-life integration in order to maximize wellness and productivity. In addition to her advocacy for graduate student wellness, she also stresses the importance of mental health amongst faculty, providing refreshing honesty and vulnerability while discussing strategies to prevent burnout and prioritize health in faculty positions. This mindset is reflected in another tweet: “I dealt with self-doubt at basically every career stage and transition. I think most of us do, and we just don’t talk about it often enough.”

As researchers such as Drs. Kaslow and Heemstra advocate for better mental health in academia, there is an urgent need for advisors and mentors across departments to recognize and address the need for mental wellness amongst graduate students, not only for the students’ well-being but also to better cultivate a culture of support, wellness and productivity in their respective research communities.

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References

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Our blog: [http://www.emorypda.wordpress.com](http://www.emorypda.wordpress.com)

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Office of Postdoctoral Education (more information on professional support for postdocs and other postdoc committees):

[https://med.emory.edu/education/postdoctoral-training/index.html](https://med.emory.edu/education/postdoctoral-training/index.html)
Is it in your head or in your gut? Maybe it’s in both

Over the last 20 years, scientists have learned a great deal about the trillions of microscopic organisms that live within and among us. Advances in high-throughput methods and computational technology have uncovered the vast diversity of microorganisms living in every type of environment on Earth. Microscopic bacteria, archaea, and eukaryotes are able to survive in practically every environment on earth. They also aid in many ecosystem processes, such as purification of drinking water, global nutrient cycling, degradation of toxic compounds, and the protection of human health. Our increased awareness of the prevalence of microorganisms has also prompted a shift in how we think and talk about microorganisms. Today, instead of vilifying all microbes for their disease causing potential, we now recognize that the vast majority of microbes play an important role in sustaining environmental and human health.

The term dysbiosis is often used to describe the imbalance of the microflora within our bodies. Dysbiosis has been implicated in many different types of illness, including diarrhea, irritable bowel syndrome, skin disorders such as dermatitis, and heart disease, among others [1]. In addition, a growing body of research is finding links between our gut microbiomes and brain function via the gut-brain axis.

In simple terms, the gut-brain axis is the two-way street by which the gut and the brain communicate. Communication involves both direct and indirect pathways between cognitive and emotional centers in the brain with gut functioning. Research has demonstrated that gut-microbiota can influence cells in the gastrointestinal tract, possibly playing an important role in gut-brain communication [2]. Whether our gut microbiome is modulating communication of the gut-brain axis, exactly how it might be doing so, and the possible connections between our gut microbiome and the onset of neuropsychiatric disorders, such as anxiety and depression, are all questions that remain to be answered, fueling active research.

To date, most of the work assessing possible connections between the gut microbiome and brain functioning via the gut-brain axis have focused on animal models. However, a recent study by a European group of researchers has garnered widespread attention, largely because the reported findings came from a large human cohort [3]. In the study, they surveyed participants of the Belgian Flemish Gut Flora project using a questionnaire that measured their self-reported quality of life as well as their incidences of depression. The researchers then correlated those survey results directly with the microbial taxa present in participants’ gut microbiome in order to see if people who reported being depressed and having lower quality of life had a different composition to their microbiome than those who were not depressed and reported having a higher quality of life. They found that certain microbial populations were positively correlated with those who reported a high-quality of life, specifically, Faecalibacterium and Coprococcus.

Additionally, they found that Dialister and Coprococcus were less abundant in participants with depression, even after accounting for the use of anti-depressants among participants. Moreover, they found that people who responded as having a higher quality of life also contained a dopamine metabolite that researchers suspect might be microbially synthesized. These results suggest that the presence of specific gut microbes and their metabolic activity may play important roles in regulating our mental health.

While these recent findings provide further evidence to support the hypothesis that there is a connection between gut-microbiome metabolism and mental health, more research in human subjects is needed to validate the inferred relationships reported. The onset of psychological disorders is certainly a complex process involving a myriad of biological and non-biological factors. Even still, the preliminary findings discu-
ssed above are compelling, particularly for individuals who suffer from anxiety or depression. They provide possible avenues for further research, which could lead to novel microbiome-based therapies to help people affected by negative mental health.

While a healthy microbiome may not be a panacea for a growing mental health crisis, evidence is mounting for the potential of a healthy gut-microbiome to help people better regulate and manage their mental and emotional response to the daily onslaught of anxiety-inducing stress.

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References


Are you struggling with your mental health? Do you want private and immediate feedback about your personal well-being?

Emory’s Faculty Staff Assistance Program provides a confidential online self-assessment service at:

http://www.fsap.emory.edu/