

Psychedelics

OPEN

INNOVATORS & IDEAS: RISING STAR

Erin Mauney: Psychedelics as modulators of the gut-brain interaction

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Dr. Erin E. Mauney serves as Assistant Professor of Pediatrics (Gastroenterology) at Tufts University while maintaining a research appointment at Massachusetts General Hospital. With dual board certification, including obesity medicine, she integrates clinical expertise with innovative research at the intersection of gut-brain disorders and psychedelic medicine. Dr. Mauney's groundbreaking work explores how psilocybin modulates interoception in treatment-resistant IBS, the first study of its kind in gastroenterology. In this Genomic Press Interview, she articulates how early-life trauma becomes somatically encoded and how psychedelic-assisted therapy creates pathways for emotional release and functional improvement. Her patient-centered approach combines neuroimaging, qualitative analysis, and clinical outcomes to develop scalable therapeutic options that challenge the artificial mind-body divide in contemporary medicine. Dr. Mauney's research represents a paradigm shift in understanding how psychedelics may transform treatment for the significant population of patients who remain unresponsive to conventional therapies.

Part 1: Erin Mauney – Life and Career

Could you give us a glimpse into your personal history, emphasizing the pivotal moments that first kindled your passion for science?

I was interested in science from a young age; my mother recounts that at age 4, I kept "experiments"—small containers of flour, sugar, and water—hidden throughout the house and guarded them jealously as I watched bacteria and mold bloom on the surface. I briefly thought about channeling my love for argument and rhetoric into law, but ultimately became fascinated by neuroscience and how our brain and body communicate constantly.

Please share with us what initially piqued your interest in your favorite research or professional focus area.

I have maintained this interest in bacteriology, as I was drawn to gastroenterology in part due to its emphasis on understanding and modulating the unfathomably vast microbial world inside of us. In fellowship, I conducted basic science research in the lab of Dr. Kostic on bacteria that help induce immune tolerance. In my clinical life, I love that GI is such an integrative field and that addressing GI disorders requires understanding the patient's psychosocial background, resources (e.g., access to healthy food), and daily life. During my medical training, I became aware of how common trauma, especially early life trauma, unfortunately is in the human experience. Although there is more discussion in pediatrics about the cumulative effects of toxic stress over the lifespan, I think overall this is an area that medicine, particularly gastroenterology and obesity medicine, really fails to understand and address meaningfully.



Figure 1. Erin Mauney, MD, Tufts University, USA.

We would like to know more about your career trajectory leading up to your current role. What defining moments channeled you toward this opportunity?

I had read a bit about ayahuasca in undergraduate coursework, but like so many people, my entry point into psychedelics was with reading Michael Pollan's "How to Change Your Mind." I read this during the pandemic as I officially decided to enter pediatric gastroenterology as a field. I have also been reading primary psychodynamic literature to understand early life's





impact on mind-body disorders, such as “Theaters of the Body” by Joyce McDougall. I was also significantly influenced by Winnicott’s work on play and playfulness in therapy and healing – he was a psychoanalyst and pediatrician, similarly interested in how early life shapes people. Putting together these thoughts with the patients and families I have taken care of over the years with very entrenched, challenging somatic symptoms without apparent cause, many of whom had suffered horrific abuse, I became very interested in the applicability of this emerging (or perhaps more apt to say, re-emerging) field of psychedelic-assisted medicine to patients who seem to be at war with their bodies.

What is a decision or choice that seemed like a mistake at the time but ended up being valuable or transformative for your career or life?

I did not get into my top choice of pediatric gastroenterology fellowship. I applied to stay at my residency institution, Boston Children’s Hospital, but was matched across town at Massachusetts General Hospital instead. This felt like quite a blow and a personal failure at the time! However, I had an incredible fellowship experience and gained access to many mentors, including Dr. Franklin King at the Center for the Neuroscience of Psychedelics and Dr. Brad Kuo at the Center for Neurointestinal Health, whom I would have never worked with had I gotten what I thought I wanted.

What habits and values did you develop during your academic studies or subsequent postdoctoral experiences that you uphold within your research environment?

Cultivating honest, genuine relationships with each person you work with, whether your subordinate or your superior, is critical to effective work. It is important, but not easy, to bring your whole self to work and to create an environment that allows others to do the same. It also makes being at work a lot more fun! Beyond that, being meticulous, paying attention to detail, and moving forward on decisions that need your input quickly are key, especially in the dynamic field of clinical research.

Please tell us more about your current scholarly focal points within your chosen field of science.

I am interested in how psychedelics like psilocybin can modulate interoception, or how people perceive their body, and specifically their GI symptoms. Our current study, in which patients with refractory IBS are given two doses of psilocybin and associated therapy pre- and post-dosing, is the first psychedelic study within the field of gastroenterology. I am interested in how to optimize psychedelic therapy and bring it to the clinic at scale. I would love to one day study this more mechanistically and from a basic science perspective, e.g., in model organisms, but right now my research is focused on both patient-reported outcomes (e.g., abdominal pain), qualitative patient reflections on the experience, and neuroimaging correlates via fMRI.

What impact do you hope to achieve in your field by focusing on specific research topics?

This study brings a new option for patients who have not been helped by any existing approaches to IBS (which may be 60%+ of patients by some studies!) I also hope that, in a broader sense, this work helps heal the schism between mind and body that so many physicians practice within.

What do you most enjoy in your capacity as an academic or research rising star?

It has been very fun to share the preliminary results of our work with other doctors and scientists and to be inspired by their approaches to psychedelic therapy. On a personal level, I enjoy the complex, fast-paced work of early-stage clinical research. It is a different skill set than what I use to see patients or perform endoscopy, but it is gratifying to see all of the small decisions you make add up to a big study with exciting data.

At Genomic Press, we prioritize fostering research endeavors based solely on their inherent merit, uninfluenced by geography or the researchers’ personal or demographic traits. Are there particular cultural facets within the scientific community that warrant transformative scrutiny, or is there a cause within science that you feel strongly devoted to?

Although my research is primarily with adult subjects, working in pediatrics means witnessing the injustice and inequality in our society every day. I am deeply interested in pediatric obesity prevention and treatment. Adequately addressing this cause will require a full-scale realignment of our society’s priorities, including in the food we subsidize and then feed to our children, the car-centric nature of our cities, the focus in schools on sitting and performing academically, the degree to which we allow social media and other tech companies to denigrate childhood in order to make money, and beyond.

Outside professional confines, how do you prefer to allocate your leisure moments, or conversely, in what manner would you envision spending these moments given a choice?

I love spending time with my two young children, my husband, and my dog, exploring Boston’s many parks, which are little gems throughout the city.

Part 2: Erin Mauney – Selected questions from the Proust Questionnaire.¹

What is your most marked characteristic?

Persistence.

Among your talents, which one(s) give(s) you a competitive edge?

Persistence again – the refusal to take no for an answer when I really want something ☺.

If you could change one thing about yourself, what would it be?

Increased self-compassion and acceptance.

What is your current state of mind?

Hopeful and excited about science, worried about the state of the world.

What is your idea of perfect happiness?

I love the feeling of hanging out with family after a day of productive writing and a nice long run in the sunshine.

When and where were you happiest? And why were so happy then?

Now, after finishing medical training and having more self-determination about how I spend my time and structure my days.

What is your greatest fear?

Losing my kids.

What is your greatest regret?

Not being more open and loving with the people I care for.

¹In the late nineteenth century, various questionnaires were a popular diversion designed to discover new things about old friends. What is now known as the 35-question Proust Questionnaire became famous after Marcel Proust’s answers to these questions were found and published posthumously. Proust answered the questions twice, at ages 14 and 20. In 2003 Proust’s handwritten answers were auctioned off for \$130,000. Multiple other historical and contemporary figures have answered the Proust Questionnaire, including among others Karl Marx, Oscar Wilde, Arthur Conan Doyle, Fernando Pessoa, Stéphane Mallarmé, Paul Cézanne, Vladimir Nabokov, Kazuo Ishiguro, Catherine Deneuve, Sophia Loren, Gina Lollobrigida, Gloria Steinem, Pelé, Valentino, Yoko Ono, Elton John, Martin Scorsese, Pedro Almodóvar, Richard Branson, Jimmy Carter, David Chang, Spike Lee, Hugh Jackman, and Zendaya. The Proust Questionnaire is often used to interview celebrities: the idea is that by answering these questions, an individual will reveal his or her true nature. We have condensed the Proust Questionnaire by reducing the number of questions and slightly rewording some. These curated questions provide insights into the individual’s inner world, ranging from notions of happiness and fear to aspirations and inspirations.



Figure 2. Spring arrives in Boston.

What are you most proud of?

My family.

What do you consider your greatest achievement?

Giving my children a loving, warm, and secure childhood.

What or who is your greatest passion?

Restoring humanity to the practice of medicine.

What is your favorite occupation (or activity)?

Long, contemplative walks in the Boston spring (see Fig. 2).

What is your greatest extravagance?

Travel.

What is your most treasured possession?

We just bought our first house, so I will go with that.

Where would you most like to live?

Scandinavia, Portugal, or Costa Rica.

What is the quality you most admire in people?

Genuineness.

What is the trait you most dislike in people?

Incompetence.

What do you consider the most overrated virtue?

Restraint.

What do you most value in your friends?

Sense of humor, steadiness.

Which living person do you most admire?

No one person, but bits and pieces of so many.

Who are your heroes in real life?

Some people have much less comfortable lives than I do, yet show up every day with a good attitude and a desire to give their best and ease others' load.

If you could have dinner with any historical figure, who would it be and why?

Mr. Rogers – such a deep understanding of and compassion for children (and the children within each of us).

Who are your favorite writers?

Mary Olliver, Ed Yong, Richard Powers, Elena Ferrante, Robin Wall Kimmer, and Catherine Newman.

Who are your heroes of fiction?

I have two: Jonas from Lois Lowry's *The Giver*, a boy who risks everything to escape his emotionless dystopian society after being chosen to receive its suppressed memories, and Demon Copperhead from Barbara Kingsolver's novel *Demon Copperhead*, a modern Appalachian retelling of Charles Dickens's *David Copperfield*, who survives foster care and the opioid crisis with remarkable resilience. Both characters face broken systems with moral courage that I deeply admire.

What aphorism or motto best encapsulates your life philosophy?

We are what we repeatedly do.

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