

## Q&amp;A

## Bianca Jones Marlin

Bianca Jones Marlin draws inspiration for her work from people's stories. In an interview with *Neuron*, she talks about overcoming the challenges of the past year—opening a new lab, caring for a young family, and gaining the strength to speak her truth and create the inclusive community academia strives for.

**Biography**

Dr. Bianca Jones Marlin is the Herbert and Florence Irving Assistant Professor of Cell Research and the principal investigator of the Marlin Lab at Columbia University's Zuckerman Institute. She holds a Ph.D. in neuroscience from New York University School of Medicine and dual bachelor's degrees in biology and adolescent education from St. John's University. A recipient of the Donald B. Lindsley Prize in Behavioral Neuroscience and the STAT Wunderkind Award, she studied under the direction of Dr. Robert Froemke at New York University School of Medicine and completed her postdoctoral training at Columbia University in the laboratory of Nobel Laureate Dr. Richard Axel.

Dr. Marlin's research investigates the relationship between the innate and the learned by examining how an organism unlocks an innate behavior at the appropriate time (e.g., maternal instinct) and how learned information can be passed to subsequent generations via paternal transgenerational epigenetic inheritance. Her work combines behavior, *in vivo* electrophysiology, neural imaging, and molecular genetics to understand the transfer of information inherent in neurons of the parent through the gamete to neurons of their offspring.

**What is your view on the role of neuroscience in broader society?**

I believe society is neuroscience incarnate. Our interactions and societal intricacies are a direct result of neurobiology. Therefore, the role of neuroscience in the broader society is to bring insight via biology to the concept of a society. We all have a brain, but not all of us understand how the brain works. In fact, at this point, neuroscientists still don't exactly understand how the brain works. Knowledge gleaned from the work we



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do will forge a bridge that the broader society has access to. It is our job to do the studies that will shine light on how the brain works, as well as to inform society so that we can all make more thoughtful, educated decisions in realms such as education, interpersonal relationships, and societal health.

**How do you find inspiration for your work?**

I find inspiration in people. Specifically, through people's stories. I find it beautiful that every individual is a capsule of a unique story, which is why it is so important to invite all lives into science. Another person's vantage point gives me perspective into how humans can navigate life, deal with stress, interact socially, engage with their parents, and foster their offspring—all focuses of our work in the Marlin Lab. This gives me inspiration. I'm thankful and generally inspired when people share their stories with me. It gives my

science breath, with real life as the motivation.

**What has lab life been like over the past year?**

My lab opened during the pandemic, in January of 2021. I have to say, my lab's morale has been far beyond what I ever could expect. I think this is because we now celebrate the little things, the little victories, the little successes that sometimes were overlooked in the past. Now, every committee meeting is acknowledged, every award is spoken about, every birthday is celebrated. Going through a year when we couldn't celebrate with each other and having my lab open during that period of time has set the culture to celebrate life. I'm so thankful for that. That being said, our work looks at transgenerational stress, which means it takes generations—and therefore a long time—to get our answers. A lot of our work was lost during 2020. We really started from scratch again, but everyone rose to the occasion.

**Speaking of interruptions in lab work last year, would you like to share specific strategies that you implemented in your lab for coping with some of these hurdles?**

I was in graduate school when Hurricane Sandy hit New York City and left us unable to access the lab for almost 2 months. That period of time motivated me to read—just the way I record-keep. Although I'm a firm advocate for hand-written lab notebooks, The Marlin Lab follows the "three-two-one rule." We back everything up in three different sources: two of those sources are on a cloud, one on a hard drive. This allows for data safety as well as accessibility. I also pushed for the data to be accessible to all other members of the lab.

**What advice do you find yourself giving to your students and postdocs?**

My favorite insight I share with my students is that science has existed and will exist long before and after we ever will. Understanding the grandeur of what we are graced to study gives a sense of humility and purpose. As scientists, we have the job to uncover a world bigger than us—to understand something that we can't fully control and doesn't "need" humanity to continue functioning. In understanding the power of science, I believe it forces the scientist to put their way of thinking aside and observe what science is saying instead.

**What do you think are the biggest possibilities or challenges for the education of future neuroscientists?**

I think that one of the biggest challenges for the education of future neuroscientists is support for their dynamic endeavors. By dynamic endeavors, I mean options such as family, or career options outside of academia. Academia has not done the most optimal job in supporting burgeoning researchers to grow in all aspects of their development. We speak very highly of welcoming people from different backgrounds and different life experiences on the shoulders of the belief that this diversity in science edifies scientific questioning and research. But as an institution we haven't always made it easy for groups such as new parents, or those coming from a low socioeconomic class. I think this challenge may be detrimental to the future of neuroscience and for the education of future neuroscientists,

because we will lose those important perspectives, that important life experience. In doing so, we are closing the door on people, and that is the opposite of what academia should stand for.

**How can we build equity for scientists from underrepresented populations?**

Historically, certain groups of people have been excluded from our institutions and academia at large. The only equitable way to address active exclusion is with active invitation. Unfortunately, we cannot solely rely on those who were openly invited into the system to create an environment of "home" for those who have not always been welcomed, so we can start to change the culture by actively and purposefully putting the same amount of energy historically seen in exclusion into fighting for inclusion.

**Do you have a role model in science? If so, who and why?**

My science role models have been my two mentors, Dr. Richard Axel and Dr. Robert Froemke. They have challenged me in unique and different ways and pushed me to go beyond my comfort zone all while being a system of support. As a result, I believe I have taken chances with the boundaries of the unknowns in science. I'm forever grateful for that stretch in my scientific journey.

**Has there been a particular moment in your life recently that you have found memorable?**

My most memorable moment from 2020 would have to be the birth of

my son. I gave birth at the beginning of the pandemic while my husband was working as a frontline worker. Our three-year-old daughter left to stay with extended family given that we did not understand how COVID could affect our newborn. During that time, when everything seemed to be on its head, we still found normalcy in having a baby and in family and friends showing up in support, even though everything in our world was turned upside down.

**What has this past year taught you about the intersection of science and life?**

This year has taught me freedom in speaking truth. In the past, it has not always been easy to explain or describe my experience as a Black scientist. It was commonly met with a qualifying statement such as, "It's not because you are Black, but because of [something else] that you were treated that way." This year gave me strength and confidence to speak up about my experience as a Black person in academia, despite fear that people wouldn't believe my experiences or suggest my hurt is instead an overreaction or misconstrued perspective. People may not believe me, but I realized that by speaking about my unjust experiences and maltreatment, I provide the validation that has been withheld from our stories. Those who choose to believe me can hear my story, and people who know my experience can find camaraderie. In sharing, I create the inclusive community academia speaks to and strives for.

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