



CAREERS IN NEUROSCIENCE: SO YOU WANT TO BE A GRADUATE STUDENT?

Notes from a virtual panel discussion with Q&A featuring MD, Ph.D. candidates and graduates with interest in neuroscience.

[More information about our panelists.](#)

Dr. Jessica Barson: Associate Professor, Co-Chair of PhD Admissions Committee at Drexel University

Barson pursued her master's degree and graduate research in neuroscience and psychology at Princeton University in 2004. She trained under the mentorship of Bart G. Hoebel studying the regulation of alcohol intake by dietary fat and fat-stimulated neuropeptides. In 2006, Barson obtained her Master of Arts in Psychology and Neuroscience, and then in 2009, Barson obtained her PhD in Psychology and Neuroscience. Following her graduate training, Barson moved to New York City to complete her postdoctoral research training at The Rockefeller University in Behavioral Neurobiology in 2009 and completed her postdoctoral studies in 2014.

Dr. Tracy Riggins: Associate Professor at University of Maryland

I have a Ph.D. in child psychology and my subdiscipline is developmental and cognitive neuroscience. Our program accepts graduate students through psychology and neuroscience and cognitive science and the interdisciplinary graduate training program

Deena Shariq: PhD Student at University of Maryland

First-year student in [the NACS program](#). I majored in biology during my undergraduate. My current area of focus is poverty, and how that impacts children's brain and cognitive development and sources of resilience, such as their neighborhood or community.

D'Alizza Mercedes: PhD Candidate at the Chicago School of Professional Psychology

I'm a 3rd year Ph.D. student, and my area of research emphasizes the study of marginalized communities and the perceived sense of belonging, and the "imposter phenomenon" and behavior.

Dr. Daphne Soares: Associate Professor at New Jersey Institute of Technology

I am interested in how neurocircuits develop in the context of evolution, intermingling evolution development, and your physiology. Interested in how neurocircuits change over time.

Arcadia Ewell: PhD Student at Boston University

I am a UMD alumna and completed a 2 year post-baccalaureate in Dr. Riggins's lab. Now my research is focused on experiences of early chronic stressors, and how that relates to neurocognitive development with specific interests in memory and executive function



What excites you most about the field of neuroscience today?

Collaboration & People

- Meeting all these fantastic people; collaborators, having great students interacting with other biologists and even non-biologists, right now I'm working with an evolutionary biologist, and the ideas are just like flowing back and forth, putting neuroscience into the details of evolutionary context, has been excellent. DS
- How collaborative the field is becoming. Two of my three major Grants are with our multi-PI collaborators. Having other pairs of very helpful eyes who are vested and have different points of view who are helping me, so I'm no longer having to stand on my own two feet. JB

The Unknown: We know just enough to know we don't know anything. Moving away from the description of the phenomenon and instead focusing on the mechanisms. Focusing on the how, how are things happening in the brain and why behaviors are occurring. TR

What made you decide on pursuing PhD in Neuroscience?

- It was a professor in the biology department, because he told us that the nervous system has electricity, and I was like *no way*. Neuroscience was one of the most basic things that explained human existence so I stumbled upon it. DS
- My neurodivergent brain and questions are accepted, discussed, and they're thought about in the Ph.D. world. *I was going through the 40-year-old midlife crisis existential awakening. Who am I? What am I doing? What am I offering this world? It was a hardcore, existential crisis. My favorite question ever in the world has always been Why? That was always my question, like, But why is your brain working like that?* DM

Qualities of a successful PhD applicant:

- Admitting when you don't know the answers to questions. So much of your first few years is just a lot of information being thrown at you so being able to accept and say "I don't know this" and "I need my hand held," "I need to get coaching". AE
- Learning when to ask questions versus when to try things on your own. AE
- Being a self-advocate. Remember you are responsible for your experiences. Don't lose your voice when working with Mentors. Articulate what you need. DS

Have confidence in yourself

- Try to get rid of the imposter syndrome as soon as you possibly can. DS
- Believing you belong where you are. A Ph.D. program is the ultimate test of academic resilience and academic tenacity. DM
- We choose applicants because we believe in them. Have confidence in yourself. JB



Did you have to decide on your specific topic of study before applying?

- I had the general idea of what my research interests are, but they have become more refined since being in school. When I applied I said, "I'm interested in early adversity and neurocognitive development." Now I'm focused on early chronic experiences of stress on neurocognitive development specifically memory and executive function. AE
- Don't put the pressure on yourself to have a really fleshed-out project. Drexel, we want to make sure that when we take students that there are at least two labs where they could potentially fit and have a home, and be happy. Mentor fit is such a big deal that even if the project isn't 100% what you had hoped to do, don't close doors for yourself. JB

What was the decision factor for you?

- I applied to 8 schools and selected the program based on the mentor. AE
- *Feedback from my undergraduate professor:* I went to Dr. Carr's office and said, "This is where I got into. What should I do?" She helped talk me through it. HB

Advice:

- Ask yourself, "If I get in there, am I really going to go there?" If you don't see yourself living there, do not apply. TR
- Keep an open mind and understand mentorship style. If someone is going to advocate for you and shepherd you through the process, it is worth everything. JB
- If there's any shadow of a doubt that you do not like research don't do a PhD. AE

Advice for your "younger self" for applying to grad school?

- Allow yourself forgiveness, realize that it is your journey and that it is no one else's journey. DM
- Perfectionism doesn't exist, you just can't compare yourself to anyone, it's not a race. DM
- Start talking to your professors. I don't think I would be here if I hadn't met the professor who told me PhDs are funded. They usually are very excited to talk to students especially if they're interested in the type of work that they're doing. DS
- For a research-based Ph.D. your job is to extend where the research ends. Check out "[The Importance of Stupidity in Science](#)" which basically says that you're gonna feel stupid, if you're doing it right you're going to get to the end of knowledge, and then say, well, we don't know this and you jump. TR
- Get a good therapist before starting graduate school, and be proactive when taking care of your mental health. AE

What is the importance of undergrad research for applying to grad school?



- At Drexel we do look for prior research experience because it highlights that the applicant knows what it might be like. JB
- It's really helpful because getting that firsthand experience allows you to see whether that kind of work fits with your values. You can't read about that, you have to experience it. DS
- Very helpful. I did independent research as an undergraduate, it wasn't classified as an honor's thesis, but it was independent. Then I took a 2 year post -bac lab manager position, which was an amazing experience. I think it helped me transition a little quicker into graduate school. I was able to start working on posters and started working on my paper the first year, which allowed me to start my dissertation early. AE

What experiences (aside from research) helped build your educational career/prepared you for graduate school?

Working with me population of interest

- I worked in a domestic violence shelter because I knew I wanted to work with kids, and I knew I wanted to work with this type of high-stress population. AE

Increasing my self-knowledge

- I worked with a therapist to increase things like authentic and honest reflexivity and taking pause to reflect on myself. You have to really want it. DM
- I got a good therapist. I think one of the things that you know is that they stay with you for your whole life. DS

Other:

- Find your cohort members because that support system is so helpful. DM
- For me it was ballet. I learned, drive, focus and resilience. It helped me later to push through and deal with the rejection. JB

Review more career exploration information on the [Feller Center's website](#).