Interview with Shruthi Rajashekara

Tim: We are speaking today with Shruthi Rajashekara. Shruthi began her career in the Department of Biological Sciences in 2004. She completed her undergraduate education in December 2007, graduating with Highest Honors.

Shruthi: Can you tell us why did you get involved in undergraduate research?

Shruthi: Well when I first came to Purdue I knew that I might want to pursue graduate school in the future so the opportunity presented itself and I took it.

Tim: Can you tell us just a little bit about the process which you went through to find a research lab?

Shruthi: I looked online at the Biological Sciences website and just looked through the research that various professors were doing and since I’m interested in infectious diseases I found something related to viruses. I emailed a bunch of professors. Some of them emailed me back and said they didn’t have room in their lab. One emailed me back and said he doesn’t have room but here’s another professor who does and is doing research really similar to his. So I contacted the other professor who happened to be Dr. Kuhn and I work in his lab now.

Tim: Great. So what misconceptions did you have about undergraduate research that when you look back you now laugh about?

Shruthi: I guess, I thought it would be much more structured than it really is. I didn’t expect to have as much independence as I do now and I was really worried about messing up at first. But I found out that if you do, accidentally set a lab bench on fire that it’s okay, ‘cause you can easily put it out and keep going on.

Tim: Excellent. What would you tell a first or second year biology student was the best thing about undergraduate research?

Shruthi: The independence and the fact that you are actually applying what you’ve been learning in your classes, in the required labs. I don’t really know how much I took away from those required labs but applying it in my own lab to my own research where I formulate some of my own projects has definitely helped me understand the material better and help me perform better in my other classes.

Tim: You mentioned your work as more independent now; I imagine that’s not the way it started out. Can you talk a little bit about how it was at the beginning and then how it became more of an independent project for you?

Shruthi: When I first started out I worked with a graduate student and he basically just told me here’s what I want and he went through and went through all the set ups, told me what I should probably expect and I just basically did whatever he told me to. So that was good at the beginning because I learned my way around the lab, I learned different procedures. But then later on I started to get, I first got my own small project and I worked with that. I worked closely with the graduate student on that project so that if I had any questions, which I usually did on how to set things up and he was there and could help me. And now my projects changed, it’s a little larger and I work with a post grad now and she basically told me what she wants me to do, what mutations she wants me to introduce into this protein or which tags. So I designed the primers which I had learned before and I basically design or set up the experiments how I want to, decide how much of what to put in. If I have any questions, if I’m not sure about something she’s always there for me to ask questions to but I feel like I understand it better so I can do a lot more of it on my own.

Tim: Can you describe your research for a general audience, namely first year biology majors?

Shruthi: I’m working on the structure of a certain protein in the Sindbis virus and basically I’m tagging that protein with various markers that we can detect via florescence to locate it and to study its structure and function when it infects a cell.

Tim: Shruthi, earlier you mentioned your interest in infectious diseases. I would kind of like to talk about that. In light of the study abroad experiences you’ve been. I know for a fact you’ve gone to a couple of places. Can you tell us a little bit about your study abroad experiences please?

Shruthi: The first place that I went to was Denmark. It was actually a six-week long summer program. The first three weeks were in Copenhagen and then it was a week in London, week in Paris, and a week in Amsterdam. I wasn’t entirely sure what to expect going into the program but I knew that I had to go because the titles HIV and AIDS in Western Europe and that sounded really interesting. So for the first three weeks we did we had two classes one was Biology and the other one was kind of just looking at the social aspects of HIV and AIDS which was completely new to me because when we looked at it from a Biological aspect and that’s what first interested me in it. What was great about this program is that it
completely opened my eyes to the more medical aspect of HIV and AIDS and diseases in general. Looking at them from the patients prospective and what the patient has to deal with and just the stigma that surrounds HIV and AIDS. And so when we were in Copenhagen and the other three cities we visited various organizations and just learned how they support these people and the sort of counseling that they might need and whether or not they’re comfortable even getting counseling. We met patients and got their perspectives and it was a very eye opening experience. And then later on I went to Paris. Mainly to complete my French minor but I also got an internship at Médecins du Monde which means “doctors of the world” and they have a free health clinic in Paris. They actually are a branch off of doctors without borders. Mostly we would get African immigrants who would come in just to see the doctor and usually they would wait for hours just to get in but we would have around fifteen people waiting in the waiting room at one time. My job basically was to explain to them what hepatitis, HIV, and AIDS are and then talk to them about how they can prevent getting it. How they can protect themselves, different treatment options and basically just get them comfortable with the idea and let them know that they need to protect themselves from it. A large number of African immigrants who come to France have HIV and AIDS compared to other minority groups and so it’s just important for them to get this information. So a lot of people weren’t comfortable with the idea, the hardest part for me was standing up in front of a group, I was really nervous at first and then I just got used to it because frankly after you’ve explained how to use a female condom so many times you just get used to standing up in front of people. In Africa there are certain misconceptions about HIV and AIDS but just to hear them first hand was something completely different. For example one time there was this man who got up in the middle of my presentation and started shouting because he swore that the only reason HIV and AIDS had ever come to Africa was because France and Western countries they were sending contaminated condoms to their country and it was just incredible to see that they had these opinions and it’s really hard to fight something like that but you do what you can.

Tim: The program that you went to in Paris was the semester study abroad program. How often did you get to work with the African immigrants?

Shruthi: I worked about ten hours a week so I would go in; there was a morning session and an afternoon session basically. I would usually do three presentations a week and then sometimes after that I would if there weren’t a lot of people in the waiting room I would talk to people individually instead. So it was about ten hours a week.

Tim: How did both of these programs impact your understanding of infectious diseases?

Shruthi: Definitely broadened my understanding of infectious diseases because it, I had mainly been thinking about them in a Biological aspect or that was were my main interest lay and now its branched out more of the public health aspect and the socioeconomic aspects of dealing with infectious diseases.

Tim: Do you think you’ll apply this to your future career?

Shruthi: Oh I hope so. I am planning on going to medical school. I want to hopefully get a fellowship in infectious diseases and work with some aspect of public health in the future. I’m not really sure how I’m going to incorporate everything but I definitely want there to be a humanitarian aspect to my work.

Tim: Thank you very much for speaking with us Shruthi Rajashekara. Good luck with your educational and research pursuits!