

MRI Spotlight: Shonagh Russell, Graduate Student

Shonagh Russell is a 5th year Cancer Biology Ph.D. student. She is part of the Cancer Physiology Department under the mentorship of Dr. Robert Gillies and was recently awarded the prestigious NCI F99/K00 grant.

How did you choose cancer research as a line of work? (Did you choose the job or did the job choose you?)

From an early age, I gravitated towards science and, in particular, biology. I believe it's because there's always a different question to be answered. Later in life after seeing many of my close family and friends pass away from cancer, I knew I wanted to make a difference and the only way I saw this being possible was immersing myself in research with the hope of helping those with cancer.



What made you decide to come to Moffitt?

When I was studying biology in my undergraduate program at [St. Andrews University in Scotland](#) I dreamed about working in cancer research. I had a specific vision; I wanted to pursue a career at an institution that focused on cancer research that directly benefitted patients. As most of you know, **Moffitt Cancer Center** is well-known for their [translational research](#) efforts, and huge focus on patient care and patient well being. On a whim, I went onto Moffitt's website hoping there was a [PhD program](#) and sure enough, there was! I applied immediately but I heard nothing.

While I was waiting to hear back from Moffitt, I applied for and was receiving other PhD program offers, but as the deadlines for acceptance were starting to draw near I kept delaying my acceptance - I really wanted to be at Moffitt! Finally, I decided to emailed a few people to ask if I was ever going to receive an interview, and to my surprise, I heard back. My interview was pushed-up and it was a little nerve-wracking! Everything was conducted by conference call, so I couldn't see my interviewers and they couldn't see me; the whole time I was on the call I just kept talking and hoping I was answering all the questions to their satisfaction. After my interview, I waited some more, and I finally found-out I was accepted into the program during my Biology Ball at St. Andrews.

What was your reaction when you found out you were accepted into Moffitt's PhD Program?

After I found out, I went around thanking everyone at the Ball all my professors who mentored me and wrote me references were there that night. It was such a nice way to find out.

Sidenote: What is a "Biology Ball?"

It's a graduation celebration specific to our biology department and it involves a dinner, dance and a [cèilidh](#), which is a Scottish dance we do.

Have you studied abroad in the past?

I only studied in Scotland because university education is free if you're from there, so why would I leave?! However, I have traveled other countries extensively, and have made multiple trips to Florida in the past.

When you came here, what was the biggest change?

I think Florida is a lot more laid back than the UK. Although everyone at Moffitt takes their work seriously, there is a nice balance here. Overtime, I've kind of come to realize that life is worth enjoying and that's why we're trying to help people, because we want them to enjoy life, too. There is a nice juxtaposition here where you're working hard and can directly see the impact your research has on others.

What was your first impression of Moffitt?

It sounds clichéd because everyone says **how friendly people in America** are, but I was surprised at how that is genuinely true and how everyone wanted to help. It's always scary coming into a new institute or lab, but I never felt like I was out of place. Everyone was always there to lend a hand or explain something. I didn't feel like a fish out of water because I was more of like a baby fish being helped along.

What is a lesson you have learned since your time here at Moffitt?

Listen to other's advice, but realize that in research **everyone has a different opinion**. At some point, you really need to decide **where you stand** and **where you want your research to go**. @Dr. Gillies has been a great mentor for me in this regard, because as long as I have a basis for an idea and can explain what I want to do, he will encourage me to explore it and help as needed. Also, young researchers have to realize that everyone around you is also working hard and trying to conduct their research too. Stopping to helping other people isn't going to negatively affect your research. **In the end, team science is way more effective than solo science.**

Who is your biggest inspiration?

My parents are by far my biggest inspiration; they have always encouraged me to find a career that makes me happy. Although I live across an ocean from them, we speak almost every day and that continued support drives me to work hard.

Can you tell me about the recent grant you received and why it's important?

I recently received notification that I obtained the [NCI F99/K00 grant](#) for my proposal "**Understanding metabolic vulnerabilities in cancer and the impact the tumor microenvironment has on cancer progression**". Getting a grant was something I only dreamt of achieving when I started my Ph.D., as we are all told of the difficulty in gaining grant funding. This is definitely my most memorable achievement in my life to date and will allow me to continue working in the field of cancer research for the foreseeable future, which is my passion in life.

My main interest is cancer metabolism and how the tumor microenvironment affects cancer metabolism. Right now my research isn't specifically focused on one type of cancer, so I've been working on proteins that the cancer cells express that produce acid and how this changes their metabolic phenotype to make them more aggressive and invasive. In my postdoctoral work, I would like to move on to small-cell lung cancer and focus more on clinical translational research.

You're the second postdoctoral student to receive this award through USF and based at Moffitt. What makes it so competitive?

It only allows one application per institute and Moffitt also includes USF in that. That makes it very competitive internally and then you have to compete the other institutes' candidates. This grant is also one of the few that are open to international students and so applicants are competing against all U.S. students in addition to all international applicants as well. I think they're looking for people who are thinking about their career as a whole and know what they want to work on, who they want to work with, and have a plan to accomplish their goals.

Any advice for incoming PhD students?

I would say that although you think you may know what you want; you don't necessarily know what is best for you. When I first came in, we did a year of classes and one of the first things we were asked was to describe what kind of lab we would want (small or big, hands on or hands off guidance etc.) I thought I would want a small lab and someone who would be there all the time and who would provide me a lot of support. I did my rotation in Gillies' lab and realized I need independence, time to work on my own and figure things out, and that I can't be micromanaged. I believe that has made me a better scientist so I would tell everyone to go outside of their comfort zones and see if there isn't a better fit than what they've imagined.