Valisha Edwards: That's one of the biggest things that I'm experiencing right now is the idea of what it means to feel like an imposter. But I feel like you have to, in a sense, understand that the part of being imposter is just the anxiety. It's just pretty much saying, "I'm meant to be here. We just need to figure it out."

Michael Holtz: Yeah.

Valisha Edwards: It kind of peaks up and comes up in different ways, but that means you're present in the moment. So we're going to figure out how we can do it, right? The imposter wouldn't be the imposter if you didn't have the capabilities to actually do what you need to do.

Speaker 2: This is the ORISE Featurecast. Join host Michael Holtz for conversations with ORISE experts on STEM workforce development, scientific and technical reviews, and the evaluation of radiation exposure and environmental contamination. You'll also hear from ORISE research program participants and their mentors as they talk about their experiences and how they are helping shape the future of science. Welcome to the ORISE Featurecast.

Michael Holtz: Welcome to the ORISE Featurecast. As ever, it's me, your host, Michael Holtz from the Communications and Marketing Department at the Oak Ridge Institute for Science and Education.

The FBI Visiting Scientist Program is one of many research participation programs managed by ORISE. The FBI Visiting Scientist Program is a once-in-a-lifetime opportunity for early career scientists and recent graduates to participate in forensic science research at the FBI Laboratory, one of the largest and most comprehensive crime labs in the world.

I recently had the opportunity to interview several former and current participants of the program. What follows is my interview with Valisha Edwards. I hope you enjoy it. Valisha, what is your role with the FBI Visiting Scientist Program?

Valisha Edwards: I am currently a visiting scientist and I work in the chemistry section.

Michael Holtz: And what do you do in the chemistry section, what is some of the research, some of the applications that you're working on?

Valisha Edwards: Okay, so I'm in Counterterrorism and Forensic Science Research Unit, and we're currently managing, or I'm managing multiple projects that range from primary explosives to toxicology. So pretty much overseeing the analytical techniques, instrumentation that pertains to these projects. I typically map out the research in general in its entirety, and then I just do the testing that's required for each project.

Michael Holtz: Awesome. Has science always been an interest for you?

Valisha Edwards: It has. My interest in science began with CSI, the pilot episode of Las Vegas.

Michael Holtz: Of course, right? It makes perfect sense.

Valisha Edwards: Once I saw how science can help solve a crime, I was hooked. And since I saw that episode, I told myself, I was like, you're going to be a forensic scientist, and here we are years later. I was able to actually manifest that and bring it into fruition. So very fortunate.

Michael Holtz: That's awesome. So we've talked to Jane and Quentin and we talked to Quentin and Cody yesterday. And I think one of the interesting things is, and particularly Jean talked about, is the research that sort of improves and demonstrates that we've improved a technique or we've made something work better. How important is that for you being in the Visiting Scientist Program, just to see some of that stuff come to fruition?

Valisha Edwards: It's extremely important. When you think of the FBI and you hear of an agency of the stature, you always wonder what is it that they do internally? And to be in the thick of it and you get to see how things play out, you see the logistics, the mechanics of we are going to actually see the birth of an idea, and then it kind of unfolds and plays out. And to be one of the parties that's responsible for that, you're just like, oh, so this is what it's being utilized for. That's an intended purpose. From someone who used to work on case work, you kind of see the end product of things, so see it from the very beginning. It's a new and interesting perspective for me.

Michael Holtz: So you worked on casework?

Valisha Edwards: Yes. Prior to coming to the FBI, I had worked with law enforcement. I had worked for NYPD and in addition to the North Police Department, I was their chief forensic chemist. So I was doing case work to determine whether or not a controlled substance was present in evidence. So I always saw the back end. These are drugs, where they come from, what they do? And the techniques that we utilize to kind of characterize these drugs and identify what they are, we used to get a lot of our methods and things like that from kind of the FBI, we see what they modeled and how we can utilize them in our labs. So to now be at the forefront of that, it's interesting. I actually enjoy it.

Michael Holtz: What was the, I guess, precipitating factor that you went from field work to wanting to be in the lab and as you said, at the forefront of the techniques as opposed to the back end user? What was that change?

Valisha Edwards: I think I had gotten... It became a little bit monotonous like we were doing the same thing and I wanted a change. I wanted to see what the federal sector was like. I wanted to transition into research. When you're doing casework every day, you don't get the opportunity to venture in and kind of see what's going on in the field because you pretty much pick up your cases, do what you need to do, return them, and it's like the same thing every day. So when I saw this opportunity, I was like, I think it's time for a change. I think it's time to transition out and kind of see what that is like. And I'm very fortunate to get the opportunity to see both sides, like the federal side in addition to the state side, and kind of see how things play out in each respective area.

Michael Holtz: That's really cool to be on both sides of that.

Valisha Edwards: Yeah.

Michael Holtz: I know science is a collaborative sport, so talk about the role of collaboration at the FBI and in the program that you're part of.

Valisha Edwards: Collaboration is extremely important because you realize, although you're one person, you can't do everything. And sometimes you also need perspective. Each person comes in with their own set of ideas, their own academic background, and they want to apply it as such. But sometimes you have to look through a different lens. They can help you see, "Hey, what if we look at it from this point of view?" And you're like, "Oh, I never thought about it like that." And it kind of actually helps map out and even carry out the project a little bit better. I think without teamwork, you become a little bit stagnant and you become a little bit stuck in your ways and ideologies. You can't see how to change or how to grow within your specific role or within your projects that you manage.

So I think being able to collaborate is pivotal and central to anyone's career, but particularly in the program, it provides a way for us to not only keep in touch with each other's projects, but also for us to get a better understanding of science in a whole. Although I'm chemistry, if I collab with someone from bio, I'm like, "Oh, now I can see the bio's application to this." And it becomes pretty helpful.

Michael Holtz: Awesome. Always good to see something from someone else's perspective, right?

Valisha Edwards: Yes, absolutely.

Michael Holtz: Valisha, is there a particular obstacle that you've had to overcome to get to where you are today?

Valisha Edwards: There are a couple.

Michael Holtz: [inaudible 00:07:58].

Valisha Edwards: My first, I think it's currently being in this program, as I mentioned before, working in casework, you kind of build a way of doing things like this is the approach I'm taking, this is what I do every day. To now be in a position where I'm doing research that's completely new to me. It kind of makes you feel a little bit uncomfortable because you don't know quite what to do, how to go about it, but it's a learning experience. So in order for you to grow as a person, you need to be uncomfortable and you need to figure out what it is that you need to grow in these different areas. And I think that's what I'm experiencing now, like managing multiple projects, although I've done that before, it's a little bit different, because I'm seeing it from the beginning to the end.

And it's just telling myself, you just need to have... The battle is just showing up. So we're just going to show up, we're going to figure it out. And in the event we need to collab, sometimes you just need to bounce your ideas like, "Hey, I'm at this point, I'm a little bit stuck, not quite sure." And it's kind of just being able to allow yourself to say it's okay to not know, right?

Michael Holtz: Yeah.

Valisha Edwards: And it's okay to feel a little bit lost, but once you figure out... I always have to go back to my why, why did I get into STEM? Why did I get into forensics? And that kind of helps me get a better understanding of we could do this, we're going to figure it out. So it's just one day at a time, and I've been able to kind of progress so far. So very grateful for that.

Michael Holtz: It sounds like a good methodology for overcoming imposter syndrome too, right? Because I'm sure-

Valisha Edwards: Yes. Extremely big. That's one of the biggest things that I'm experiencing right now is the idea of what it means to feel like an imposter. But I feel like you have to, in a sense, understand that the part of being imposter is just the anxiety. It's just pretty much saying, I'm meant to be here. We just need to figure it out. It kind of peaks up and comes up in different ways, but that means you're present in the moment, so we're going to figure out how we can do it. The imposter wouldn't be the imposter if you didn't have the capabilities to actually do what you need to do.

Michael Holtz: Absolutely right. And that's just basically our negative self-talk thing. I don't belong here. I can't do this. [inaudible 00:10:22].

Valisha Edwards: Yes.

Michael Holtz: On the other side of that, what about successes? Are there particular successes that you can point to and say, I'm really proud of a project I worked on or a research effort that... And it could be all of it and that's-

Valisha Edwards: It could be all. I want to say it's all of the above. I think being in this moment right here, my journey to becoming a forensic scientist was not linear. There was different ebbs and flows that I had to experience for life, within life, I should say. But the determination that I had to overcome and stay positive and stay true to what is it that I wanted to do. Just my story, I feel like is a success in itself. A girl coming from Jersey City, urban area, Caribbean descent, to now saying, "Hey, I'm actually being able to work with the FBI, like I oversee some of their projects." Not many people get that opportunity. And also to be able to say, "Hey, I said I wanted to be a forensic scientist, and I'm actually doing that." So I very proud of that.

But I think one of the major successes that I've had in life is in my former role as a chief forensic chemist. I came into a completely new, I guess, agreement between two agencies, and there was no plan. It was just like, "Hey, you're going to sink or swim, you need to figure it out." And in the first beginning stages, you're like, "Oh my crap, what did I get myself into? What do I do?" And one, you go back to your why. And then two, I just need to figure out who do I need to talk to to kind of make this work? And in doing so, collaborating with prosecutors, collaborating with the clerical workers to figure out how are we're going to make this agreement effective and efficient to all parties. So going from someone who was new to something completely different to managing an entire city by herself, I think that was one of the best successes that I've had thus far, and then-

Michael Holtz: And you had to create that.

Valisha Edwards: I had to create that. I had no blueprint. So it was just like, "All right, what do I do? Who do I talk to?" And again, talking about being the imposter, it was just like, "Girl, what'd you sign yourself up for?" But you just have to stay true to the journey and just figure out, we're here, we got to make it work.

Michael Holtz: And I have to assume on some level, representation matters as well, right?

Valisha Edwards: Yes, it really does. It really does. That's extremely important to me. I think seeing yourself modeled in someone, it can spark so many different things, and for me, representation in the field of STEM is extremely important, not only as a woman of color, but as a black woman. So if I can inspire black and brown children to say, "Hey, it's not only possible, but it's tangible and I'm evidence of that." It's the biggest accomplishment that I can ever have in this lifetime.

Michael Holtz: Awesome. I was actually just going to ask you... To the little girl in Jersey City who's looking up going, "I don't see anyone who looks like me."

Valisha Edwards: Here she is. You could do it. You just have to stay the course. There are going to be challenges along the way. There are going to be moments where you feel like you're just going to be the 1%, right? You're just going to be the only person, but you just have to stay true to the course because at the end of that, you then become the inspiration to the next young girl. So it's possible, and I'm here to show you that-

Michael Holtz: And trust yourself.

Valisha Edwards: Absolutely. Really have to trust yourself.

Michael Holtz: Talk about your mentors at the FBI.

Valisha Edwards: So my current mentor is Dr. Chris Tipple. He's amazing. I think our backgrounds align and I think that's why we work really well. One of my professional goal is to be a mass spectrometrist, and he is efficient in all those areas. So I just had a meeting with him last week and I was just like, "Hey, this is what I want to get out this program. Can we sit and figure out how you can help me and I can help you?" Sometimes you come across people who can be quite stuffy and he's not that. Being able to work with someone who's open-minded, who's like, "Hey, I hear you, I see you and I'm going to take your suggestions into considerations." It's not common, especially in science. Sometimes you have people who are older, stuck in their ways and they're like, "This is what I want to do and this is how we're going to do it." So to work with someone who's just open to being flexible, who's current, up-to-date, very fortunate that our paths cross and that's who I'm actually working under.

Michael Holtz: Awesome, that sounds great. Have you had the opportunity on the other side of that to mentor other scientists yourself?

Valisha Edwards: I have, and it's an interesting experience because you kind of see your younger self in them and you're like, "All right, this is what I'm going to tell you. These are my suggestions. I don't want to project my experience onto you, but I want to keep it completely honest and open with you." And they're always fortunate at my honesty. I'm like, "I'm not going to sugarcoat it. You're going to have your days where you're going to be like, I'm done. I've had enough. But again, you just have to figure out, why'd you get into it? What is the point? At the end of the day, you're going to be taking these exams, you're going to be going on these interviews, this is going to be your journey, and if I can help you kind of navigate and understand that, that's what I'm here for."

Michael Holtz: What is it about science that is particularly empowering to you?

Valisha Edwards: Science is multifaceted. There's so many different disciplines to it. You can be a biologist, you could be a physicist, you could be an engineer, you can have a mathematical application to it, and you could be a chemist like myself. The fact that you can pretty much approach it from different avenues and have an application that's applicable to life, something as simple as saying, "Hey, I need to figure out how I'm going to characterize fentanyl or something." We have a huge major opioid drug epidemic. What can we do to help characterize and make these trends not become so much of a trend? I think that's amazing.

The fact that I can concoct or come up with a method or mix some chemicals together or run this technique and it can actually produce a better understanding of how we can manage something as big as an epidemic. And I feel like it allows you to be creative in so many different areas. We don't have to just say, "Hey, it's just about the science, or it's just about the numbers." When you put it all together and you generate a report, it kind of tells its own story. So that's what I think is just so cool about science is the number of things you can do with it.

Michael Holtz: We've talked about this a little bit before, young and up and coming scientists who might be interested in the FBI or maybe haven't even thought, I'm a biologist, I'm a chemist, might not even think that the FBI is a place where I could do research. What do you tell those folks?

Valisha Edwards: Don't knock it until you try. Sometimes we look at things, and I know for myself, I thought FBI like, oh my gosh, an agency of the stature. I can't see myself here. It's always a goal, but oh my gosh.

Michael Holtz: [inaudible 00:18:27].

Valisha Edwards: And then you see this opportunity where a Visiting Science Program who the program in itself, I feel like gives you a trial run to say... It'll introduce you to the federal research. It'll introduce you to the logistics and the mechanics of how federal government works, and you can see for yourself whether you like it or not. I think looking into different programs and figuring out, "Hey, what can I get from that?" Sometimes we lock ourselves in this box where it's just like, "I want to do this and this is the avenue." And sometimes you just have to try something different to give you an understanding to actually vocalize what is it that you want and what you don't want to do. Now, being in this program, I can say I like federal research. I wouldn't be able to vocalize that in my previous opportunity. So I would just say, "Look into any and everything and just try it." If it's not meant for you, now you can vocalize and say, "Hey, that's something I no longer want to do."

Michael Holtz: I should have asked you this upfront, but where are you in your program? How long have you been...

Valisha Edwards: I've only been here since January.

Michael Holtz: Okay, cool.

Valisha Edwards: So I'm fairly new.

Michael Holtz: That's all right. I love it though. I mean, it sounds like a wonderful program.

Valisha Edwards: It is. Because currently I'm the only one in the chemistry unit because it goes through its seasons where people exit out and I'm managing different projects. Although it seems challenging in itself. I'm like, I get this hands-on experience. Nowadays that's pivotal in anyone's career to have that hands-on experience and be able to get a better understanding. When it comes to academics, you may read about, oh, this is how the instrument's supposed to work. But until that bad boy breaks down and you're like, "All right, why is this not working?" It doesn't start to click, and now you can say, "Oh no, that's what they met in class like when he brought it up that way." So very fortunate that it provided an area where it not only helps you professionally, but it increases a better understanding of how to use these instruments.

Michael Holtz: Because you talked about being the Jersey girl and how do you go from Jersey City to your education to... What has your career look like?

Valisha Edwards: Okay, so not quite traditional, so I'll just give you my backstory. A girl from Jersey City, and I knew I wanted to go to college, but sometimes life happens and I didn't have the finances to go to college. So luckily I was able to be an Educational Opportunities Fund scholar, and that provided me the ability to attend the College of New Jersey. And it was there that I was able to major in chemistry and do research, both analytical and forensics. I think that sparked my interest in research and in general, and that's where my first hands-on experience began. And from there, it kind of was like a catalyst in my trajectory in becoming that scientist. So I went from TCNJ and I knew I had a love for forensics, and I was like, "I need to become that." But at the time, no one was hiring.

So I was like, "What do I do?" So I ended up working for an aerospace and electronics company as their lead technician. We had a contract with the US government and trying to catalog the debris in space. So I oversaw the science behind that.

Michael Holtz: Interesting.

Valisha Edwards: Again, it was science-based, but I'm like, "This is not what I do." So I'll never forget, I had an interview for NYPD and I bombed it and I was like, "What went wrong here?" And they were asking me questions I didn't have an academic understanding for, and I was like, "I think you need to go back to school and get your degree." So I ended up going to Pace and I got my master's in forensics. Again, still it's like we got to go and become what we said we were going to do. I ended up working with NYPD in Queens. I did that for about three years.

And I was like, "I want to be close to home." So I transitioned. I worked at [inaudible 00:22:32]. It was kind of like a lateral position, but I was able to pretty much manage... Still stay in that role and analyze controlled substances. But then it just became too much for one person to manage. And at that time, I decided to not only be the chief forensic chemist, but I was like, "Let me go back to grad school and get my PhD." And then always say, sometimes you have intentions to do things, but then life happens, right? At that point, my advisor had retired. He was up for retirement, so I had no one of interest that I wanted to work with. And then at the same time, we had a new director who was restructuring the entire department, and I pretty much was out of a job.

He was like, "We're going to pretty much turn over this job to the state police." And I was at a crossroads like, "What do I do?" I was in my mid-30s and I'm like, "What's next?" And I took a chance. I saw this opening with the FBI, and I was like, "Let's shoot our shot and let's try it." And I made the net. So here I am. Now of someone who went from working, had a salary job to now here I am in this opportunity. Again, it's not your typical thing to do, but very grateful for how my life kind of mapped out because now I can say I'm able to get an understanding of everything. I saw the back end, now I'm on the front end. And I went from doing casework, now I'm doing research. So although this wasn't the life I thought... The trajectory I would take, I'm grateful for the end product.

Michael Holtz: Do you see yourself sticking around at the FBI after your...

Valisha Edwards: I would like to. I think it's still fairly new. I'm still trying to understand, again, the logistics and the mechanics of the agency in itself, but if I get the opportunity to stay in research, I think I would like that even better.

Michael Holtz: Valisha, what brings you joy?

Valisha Edwards: That's a big question. That's loaded. What brings me joy? I think the fact that I'm in the position where I can help a younger Valisha, someone that looks like, not only looks like, more importantly look like myself, but to help someone behind me. Again, the road to becoming where I am wasn't easy. And if I can make that not so treacherous for the next person, I will do that. Giving them tips and tricks on how to navigate because no one tells you how to navigate life, but if I have a sneak peek in this respective area when it comes to STEM, I can probably give you a few tips and tricks. And if that's going to help you get where you need to go, then I'm all about it.

Michael Holtz: Awesome. That is the last question.

Valisha Edwards: Was it?

Michael Holtz: That's it.

Valisha Edwards: Okay.

Michael Holtz: You did a great job.

Valisha Edwards: This is fairly quick.

Michael Holtz: I tried to make it as painless as possible.

Valisha Edwards: Thank you so much. This was great.

Speaker 2: Thank you for listening to the ORISE Featurecast. To learn more about the Oak Ridge Institute for Science and Education, visit orise.orau.gov or find us on Facebook, Twitter, and Instagram at ORISE Connect. If you like the ORISE Featurecast, give us a review wherever you listen to podcasts. The Oak Ridge Institute for Science and Education is managed by ORAU for the US Department of Energy.