- Keep pushing yourself. So I think they have to believe themselves. So there will be sometimes where they have, like, it won't work, but still they have to believe on themselves and keep pushing, keep plowing the science, and that's how they can move forward. And there is always be an exciting moment and the science will give you the high ups, I would say. So that's definitely it's a beautiful journey. I would say the scientific community and being a scientist, it's always, there is always a moment to get excited.

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- Welcome to "Further Together" the ORAU podcast. As ever, it's me, your host, Michael Holtz from the Communications and Marketing Department at ORAU. And today, I am speaking to another of our amazing NASA postdoctoral program fellows. It's a really exciting program that we manage for NASA. And I love talking to the fellows. And for this episode, I'm talking to Sunil Pulletikurti, I hope I said that correctly. And Sunil, I just wanna welcome you to "Further Together".

- Thank you, thank you so much, Michael. Yeah, so you pronounce my last name pretty, pretty nice, so that's perfect, I would say, yeah. Thanks for inviting me for the interview. I'm glad to be part of this interview, yeah.

- Awesome, well, I'm glad to have you. And I wanted to just start with Sunil, tell me a little bit about who you are and what your role is as a NASA postdoctoral program fellow.

- Yeah, that's a great question. So I started my PhD back in India. So I've done my PhD back in India, and I'm a synthetic organic chemist, basically. So, but I had a lot of enthusiasm towards the origins of life and how nature has been emerged. So, and I always look up to the NASA and the kind of work that NASA do. So, yeah, it's also always fascinating things and I know, so the organic chemistry and the chemistry is somehow very much close to like the evolution. So, and when I studying the chemistry, the basic science and the biochemistry of those biochemistry. So I came to know that there is a beautiful connection, the chemistry, how the chemistry of the small molecules have been emerged into that. And that's how I was looking into that and I found a group, which is Ram Krishnamurthy's. So, and I told my enthusiasm to him, so he was so impressed, and he was like, "Okay, let's join the group and then let's see how it gonna take us." So from there, so we were working like different projects and he was suggested me like, "How about working for the NASA and write a proposal to the NASA and see whether your idea is gonna work with them or not." So that's what was, I got so excited and like, so that's mainly one of my ambition, even since my childhood for working for the NASA. So yeah. So I was like, "So that's so cool. I'm down for it," so that's what I told him. So, and then that's how I started my progress and that's how I applied for the NASA postdoctoral fellowship. I'm glad-

- Awesome.

- ... my idea got approved and yeah.

- Yeah, y3ah. So basically this is the fulfillment of a childhood dream to be part of NASA.

- Yes.

- I love it, love it, love it. So it sounds like science has always been of high interest to you, something you've been interested, you know, you talked about working for NASA as a child. So obviously, there's been an interest in science for a really long time. Talk to me a little bit about that and how, what did that look like for you, you know, growing up in India and fostering your interest in science?

- Oh yeah, that's nice. So I was more of like mathematician in my childhood. Like I do a lot of mathematics, so I was into the math, so I do a lot of calculations and all, I was very good at mathematics. So, but as soon as I started, I was not so good at chemistry initially, but as soon I started building up the interest and studying the organic chemistry and the biomolecules, I was like, "Wow, this is so cool." Like, it is so connected to our biology and also nature. So because the reason there were, I mean, when I studied the biology, they also talk about the chemistry and the chemical molecules that's been involved in the biology. And then that's how I understand there is a connection between the chemistry and the biology and also the nature. So, and I started digging into that and started questioning some of the natural phenomenas. And that's how I started building the interest towards the chemistry and particularly towards the nature of chemistry and the biochemistry. So, yeah.

- Okay. And so now you're studying kind of the origins of life and the chemistry involved in all of that.

- Yes, currently I'm working on chemical origins of life, like how does small molecules have been emerged into the biomolecules? Like if you take amino acid, how does that become part of protein? So like when under the conditions of air-forming conditions. So yeah, that's what the idea is and how does RNA or DNA molecules has been emerged? And that led to the bio that led to the like life. So that's what we're studying the transitions. So it's so fascinating to study those kind of transitions.

- Awesome. Where are you in your postdoc? Have you started,? Are you in your first, second, third year?

- Yeah, I'm at the first year of my NASA postdoctoral fellowship, but I have already been started my postdoctoral fellowship with, fellow with the Ram Krishnamurthy since 2020. So, but after two years, yeah, he asked me to apply for the NASA and then I think it's one year for the NASA postdoctoral fellowship now. I was fascinated and very much interested in this, yeah.

- Awesome. Can you tell me about how being a NASA postdoctoral fellow has changed your career? What's impact on your career that this has had?

- That's a good question, I would say so. I mean, as soon as I get approved and first thing is like my professor and I myself got excited and I think people, whenever I talk to the people, they always look to me like, "You're a NASA postdoctorate fellow." So it's always like, I had a good feeling. I hope, I think I started applying for a few positions. Hopefully this could help me in getting a good position in the faculty. And I hope this, I think I'm pretty sure this would be very useful for my career in future.

- Absolutely, absolutely. Are there obstacles, Sunil, that you've had to face to get to where you are today?

- To get to go to NASA postdoctorate fellowship?

- Yeah, yeah, or just even throughout your education, et cetera. Have you faced obstacles to get to achieve what you've achieved?

- Oh, I had gone through a lot of obstacles, yeah. So since my childhood, I was like, I'm from basically from very poor background. So my parents were actually, they do work both of them, like they do tailoring and they have to work all the day, and so that I have to study. So there were obstacles like I was, at some point I was about to stop my studies and then go for a walk and my parents and myself and other friends of my family and pushed me saying, "That you're a good candidate, and then keep studying." And then that's how I started studying the science. So I went into the science. And so that's how it started my... And it's not easy for me, even during my PhD and I had a lot of struggle and I was, I would say, I mean, I was not able to complete my PhD, so because I had to struggle with the completion and the getting the work done, and somehow I was able to do and having a collaboration with another group and hopefully it went well, and that's how I completed my PhD. But after that, I think after my PhD, it was very smooth. So I would say the current postdoctoral supervisor/advisor is very friendly and then he's very helpful for me. So, yeah.

- Awesome. Talk to me about the role of, and it sounds like to get through the PhD process, you had to lean into collaboration. I know collaboration is a huge part of the scientific process. Can you talk to me about the importance of collaboration to what you've done and what you'll do?

- Oh, yeah, that's very good. Actually, the collaboration is one of the better ideas. I think it's very, very important for the science community. So it not only just opens up the ideas, but also give a broad perspective of the science, so it can enhance your idea and the science-

- Okay.

- Yeah, and since my PhD and I have been talking to the people about the science that's been involved. So there are some scientists that help me during my PhD and that enhanced the work that we have done. So, it's really, it's like it, it'll definitely enhance the work and the kind of work that we are doing it right now. Also, we had a lot of collaboration with other groups and they are always pushes the data, they're always pushes us. So it's important, so that we can have a better science and then better ideas. It'll improve the scientific community. Yeah, I would really, it's one of the main thing to have collaborations.

- Awesome, awesome. And I wanna talk to you too, about mentorship, because I know, you've had mentors talk about how important that is. And also on the flip-side, have you had the opportunity to mentor younger scientists? Have you been able to serve in that role as well?

- Yeah, that's, so the mentorship is one of the main key role I would say. So because you are being supervised by someone and then you need someone's guidance at some point and they need your support. And this not just by scientific support, but also emotional support, because there were some times where you have like, you feel low and you feel depressed and stressful, because it doesn't work the way you want. So I think that's the time where your supervisor or advisor comes into the pitch. And then that's how they used to suggest like, it's okay, because they had gone through all this process. And I think it's mentorship where it plays important role to keep you calm and be focused. And I think it's important. Otherwise, I think I had gone through some of the struggles with my PhD and my supervisor there. So I didn't get a good support with my PhD supervisor initially. So, but, and I told them like, "This is my struggle. I'm having a lot of stress and all." So that's what like, he understood and he gave the time to, this is very important. So the mentorship really helped me and shaped me the way I'm right now. And towards the question that you asked, if I get an opportunity for the membership, I would really love to do that. And I have given like, it's not an official mentorship that I have done, but during my PhD and currently what I'm doing it right now. So wherever I get an opportunity to train the people, I always do that, like to teach them whatever I know and then to tell them like, it's okay, they get the positive or negative results, it's okay, so keep working on. So yeah, that's how the process is, try to work on the process not to be depressed or something, yeah.

- Right, right. Sunil, what would you say to you younger scientists who might be following in your footsteps, they see you becoming a NASA postdoctoral fellow? What advice do you give those folks who might be looking to you as an example to follow? What do you say?

- I would say allow the science and stick to your idea, whatever the idea is, and keep pushing yourself. So I think they have to believe theirselves. So there will be some times where they have like, it won't work, but still they have to believe on themselves and keep pushing, keep plowing the science and that's how they can move forward. And there is always be an exciting moment and the science will give you the high ups, I would say. So that's definitely it's a beautiful journey, I would say the scientific community and being a scientist, there is always a moment to get excited. So plow the science, do your 100% or maybe 120%, so that you'll enjoy it for sure, yeah.

- I love the phrase, "Science is a beautiful journey." I think that's awesome. Sunil, last question for you. What brings you joy?

- That's a good, so I love being, like, I try to learn new things. Whenever I found something new and whenever somebody says some good idea, I try to discuss with them. I try to enjoy the way their ideas are and try to know as much as possible. So that's how I enjoy the science in terms of like, if I find something that's like exciting. So I really enjoying that in terms of the science. But out of the science, I do enjoy going out I'll play games and sports and I'm pretty much towards the nature. I love photography and going out for the hikes, that will be very close to the nature. So that, yeah, that's I enjoy most of my time.

- I love that, love it very much. Sunil, thank you so much for spending these few minutes with me telling a little bit about your story and your journey as a NASA postdoctoral fellow. I really appreciate it.

- Thank you, thank you so much, Michael. It's been a honor for me, so being part of this.

- Awesome, well, thank you very much.

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