



TRANSCRIPT

ENTERPRISE + STEM

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My name is Francine Marques, and I'm an Associate Professor and Medical Researcher at Monash University.

Curiosity was always part of growing up.

I always felt that that was something that was promoted in our household. I never felt, growing up, that my parents or my dad ever told me I couldn't do something because I was a girl.

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I was always taught I could do anything, and I think that makes such a big difference in growing up and having that feeling that you can literally go and do anything.

My father was a gynaecologist and obstetrician. So, I grew up going to hospitals on the weekends to see the patients after they had babies. But I also knew quite clear that I did not want to be delivering babies myself, and I didn't want to be necessarily dealing with patients, but I wanted to be helping them on the background.

In high school, when we were studying genetics, that's when I fell absolutely in love with science, and that's when I found what I wanted to do, that I wanted to study more about genetics and become a geneticist. And that's what I do these days. I'm a geneticist and molecular biologist.

My research is on high blood pressure. That's a major risk factor for the development of heart disease and stroke. And, high blood pressure affects one in every three adult Australians, so it's a major issue for our

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population. And the majority of people that have high blood pressure still don't have their blood pressure controlled. What we are trying to achieve now... We did a lot of studies in animal models, and what we are trying to achieve now is to run clinical trials to show that, indeed, we can use these substances produced by microbes to lower blood pressure and help to improve people's health.

My days are quite varied, and I think that's one of the beauties of being a scientist and an academic, because there is no set day. So, the days that I get to meet with my team members, so Mondays is usually the day that I allocate most of my day meeting with them. And that's a great time for me to be able to spend more time with them, to learn more about what they're doing, to talk about science, talk about their career development as our mentoring. But then there'll be other days that I'll be meeting with collaborators. I also sit in committees, and I chair some of these committees, and that's a great opportunity to network, to also drive an impact, not just within my team and with our patients and the public, but also an impact for our sector.

A lot of the time, I also spend writing grants, writing papers, analysing data. And, not as much time these days, as I would like, I spend them coming to the lab and helping my team. But that's still a pleasure, and it's still a great opportunity to continue to have those skills and develop my skills and be able to teach others.

Six years ago, I was diagnosed with stage three ovarian cancer, and that changed everything. I went from being a healthy 31 year old doing research, to suddenly becoming

the patient myself. And, ovarian cancer has a really poor prognosis, and the chance that I was going to be here now, six years later, healthy, alive, was very small. So, that made me really rethink about my priorities and what I really wanted to achieve.

I think a lot of the time, we leave that to the end of our careers and the end of our lives, because we think we have time. And as young people, we tend to do so, because there is a reason for that. But, what I had to do was to rethink about what I wanted to achieve and what was going to be my legacy if I wasn't here, six years later, or five years later, or even a year later.

So that took a lot of thinking about how I was going to reprioritize my tasks at work, the vision that I wanted to have, and what I was going to do to have an impact, an impact that I wanted to see.

Something that was really helpful was having a clear vision of what I wanted to achieve, but also having very clear values. So my primary values are fairness and accountability, and that's what I will bring in every single relationship, in every single activity I do. But also, having my clear vision of empowering other people – if that's empowering my team to become great scientists or great at whatever they want to do, to be able to empower patients to have better and clear

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decisions about their own health and getting control over their own health, empowering my colleagues to be able to come back from maternity leave and still to have successful careers if they want to.

That's where I see most of my role these days, is about enabling all the people to be able to achieve what they want to achieve.

Australian scientists are exceptional. They have so many fantastic ideas. And if we had the right investment, we could be solving so many problems, from climate change to cardiovascular disease, to cancer, to Alzheimers, to how we recycle when the amount of waste we are generating and so on. So we have so much potential, but we definitely need more investment.

When you do a degree in STEM, you don't necessarily have a very straight, or one, career option. You have so many different options with the skills you acquire doing those degrees. And I would say one of the major ones is in problem solving, that you basically need to think about what type of career you're going to be happy in doing, and also look in terms of the legacy you want to live behind.

When you look back in 30-40 years, what are you going to be the proudest of that you achieved?

I'm highly-biassed, because I love science, and I love the work that we do. I think we can impact so many people in so many different areas. But all areas of STEM are incredibly rewarding.

I think one of the biggest benefits is that, we get to work with smart people.

At least in academia, we have a lot of freedom of what do we do and the hours we do and the way we do things. But we also like freedom of thought, of curiosity, of being able to go and achieve basically anything that we set our minds to do.

I see STEM having a huge role in how we do everything in our lives. If we think about how some of our basic science discoveries, or for example, some enzymes that are produced by certain types of bacteria in very hard environments, now we can use that same technology and principles to diagnose people with COVID-19. But not only for the things that we can achieve in terms of science or maths or technology, engineering, all of these things individually, but I think what is really underestimated is the skills that someone, that goes on to have a career in STEM, has.

If you think about the skills that we have in terms of problem solving, in terms of communication, in terms of record keeping, these are some of best skills that you can actually get, and some of the skills that will take people in the marketplace, so many years to develop. And we know that people with STEM, they already have those skills.

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