

A curious brain and a heart for teaching

Want to see the world? A career in STEM doesn't have to be fixed or follow a single pathway. Associate Professor Christian Moro's career has taken him all over the globe. Let's find out more about him!

Can you tell us about what you do?

I teach physiology and immunology. While immunology looks at the immune system and how our bodies fight infection, physiology studies how the human body works and functions. It's different from anatomy which is often focussed on the names and structures of different body parts.

In addition to teaching university students, I also spend a good part of my day in the laboratory working on physiology research projects. Recently, this has involved investigating a disorder called 'overactive bladder'. It's more common than you think, and an issue that more than 16% of the population have, resulting in potentially painful, urgent desires to urinate. Most people who seek pharmaceutical treatments for this disorder end their prescribed regimens due to lower-than-expected benefits or adverse side effects. I aim to help understand how the combination of different factors within the body results in a dysfunctional bladder. By understanding this, we can start to find novel pharmaceutical treatments for bladder dysfunction that can work alongside other effective treatments, such as pelvic floor exercises and lifestyle interventions, where necessary.

On the teaching research side, I have developed tools to improve the student learning process using virtual reality and innovative technology. Through gamification, we can take the elements of what makes games fun to play and apply them to a range of activities. It has been fun, particularly when having the opportunity to develop physiology revision material that effectively functions like a role-playing game.

How did you get into this field?

I've always been fascinated by science, but I enjoyed business studies as well. From grade 11, I found that I was very interested in biology and chemistry. I wanted to get into science, so I thought I'd become a science teacher.



Associate Professor Christian Moro

Discipline: Science and Medical Education, Physiology and Immunology.

Organisation: Bond University

Degrees:

- Bachelor of Science in Biochemistry
- Bachelor of Education in Chemistry and Biology
- Master of Business in Applied Finance
- PhD in Physiology

Key words:

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Prize: Queensland Young Tall Poppy Science Award winner 2022



It wasn't that clear to me back then which kinds of science careers and pathways were available.

At the start of my career, I worked as a science teacher in different schools across London, UK, then in Brisbane and then back home on the Gold Coast. It was a lot of fun, but I always had an interest in discovering something new so moved to the university sector. I absolutely love teaching and it's a big part of what I do now as well. However, moving to a university also provided the opportunity to work in a laboratory, supervise research students, and make my own discoveries. It was quite a challenging transition, and I certainly miss the social aspects of being a school teacher such as school camps and coaching the rugby team. Thankfully, I remain considerably engaged with many of our local schools.

What excites you most about your work?

I love engaging with the community and helping people understand more about the human body. Our bodies are so fascinating, and there's still so much left to research that can be of genuine benefit. The more we learn about the body and how it works, about health and disease, the more we understand about ourselves. This knowledge can also help us relate to the world and the people around us. When you understand how the body works, you can care for those around you in a better way.

“*So, vegetable education - should we be teaching it in universities?*”

Is there anything you love to talk about, but don't often get the chance?

A question that I'd love to be asked is should we be eating more vegetables? The government discovered that only 5% of Australians eat the recommended dietary intake of vegetables each day. As Australians, we are generally eating enough fruits, but are often missing the mark when it comes to our veggie intake. I tracked myself recently, and certainly do not eat anywhere near as many vegetables as I should.

Interestingly, a lot of the issues we're seeing at the moment, like malnutrition and low fibre intake, can be rectified if we all start eating more vegetables. So how do we stop reaching for those unhealthy snacks and

choose the healthier option? It's something we are looking into. I'm personally not there yet in doing it right, but have found that simply by being aware of it, I'm eating a lot more carefully. How do we get people to meet those recommended vegetable intake? Well, one first step might be to simply get that message out there and work on effective education strategies.

What is your hope for the future and future generations?

Australian science is picking up. There's a lot more interesting roles, and science communication has become more popular than ever. I just hope that this trend can continue, and we start to support and develop an even broader range of scientific career paths for Australia's science graduates. Most students in science tend to wish to work in a health profession. Students often say they want to be a doctor and that's great! However, I'd love to see an increasing number say that they wish to be a scientist; or a science entrepreneur to start a scientific company. I hope we continue that path.

What advice would you give to young people trying to get into STEM?

I think you need to be inquisitive. Sometimes laboratory-based research is challenging. Repeating experiments is a crucial part of science and that's not always exciting. Sometimes things do not turn out the way you hypothesised, but that's okay. Failure is fine, and part of the journey. It's about asking what can we learn from this. Then, you use those lessons to help get back on track and continue your endeavours. It does take perseverance, so you have to keep the bigger picture in mind. Breaking larger goals down into smaller steps does assist. This allows you to have an idea of what you would like to achieve each day and does make things more manageable.

You won a Queensland Young Tall Poppy Science Award. How did this benefit you?

It was great meeting the other Young Tall Poppy Science award recipients and being a part of the community. There was a range of amazing people undertaking a wide variety of STEM pursuits in the room. This included award winners from mathematics, statistics, physics and many branches of science.

The award has given me an opportunity to network with these incredible scientists and researchers. It was an honour to receive the award and it's great to have programs like this to recognise Queensland science.