

Abidali Mohamedali: The biologist and entrepreneur who wants to give back

For Abidali Mohamedali, turning scientific discoveries into business propositions is about driving understanding and benefiting people rather than the back pocket.



Abidali Mohamedali wants to use science and leadership to make the world a little bit better.

If you ask an entrepreneur about their goals you'll always get the same answer, according to Abidali Mohamedali. "World domination!" says the 35-year-old with a laugh.

Though Mohamedali teaches entrepreneurship and innovation to Master of Science students at Macquarie University, his own motivations are a little more complex. For him, turning scientific discoveries into business propositions "is about getting the knowledge out there".

“If we make a bit of money, good, but if not it’s still awesome, because the world benefits.” The dream, he says, is “something like Gardasil [the cervical cancer vaccine], which can save millions of lives”.

Growing up in Nairobi, Kenya, where his family settled after leaving India in the late 19th century, Mohamedali saw a lot of poverty, hardship and missed opportunities around him.

“That was really what inspired me in the beginning,” he says. “I’ve been able to do a lot of things, learn a lot of things. I’ve been blessed, and I want to give back in whatever little way I can.”

After high school, he moved to Australia to begin a medical science degree at Macquarie, with the goal of becoming a doctor. He ended up staying on the science path, however, after encounters with inspiring science teachers during an exchange semester in the US and the realisation that medicine was more interested in *how* the body works than in *why* it works the way it does.

“I will always be one of those people asking why,” says Mohamedali, and that desire to understand led him into proteomics, the study of proteins and their effects in the body.

He got his first taste of innovation by making [an accidental discovery](#) after completing his honours and before starting a PhD, while working at the Australian Protein Analysis Facility, Macquarie’s cutting-edge proteomics lab.

The job was to produce and isolate antibodies to common proteins found in blood, which can be used in disease testing. The method involved injecting chickens with blood plasma, allowing their immune systems to produce the antibodies, and then [harvesting the antibodies from the chickens’ eggs](#).

Separating out the antibodies from the egg yolks was an expensive and time-consuming task. One evening, Mohamedali forgot to add an important chemical to a tank of yolks before heading home. The next morning he realised his mistake and headed to the lab with a sense of dread.

“But when I got there,” he relates, “it was completely separated!”

The chemical had been unnecessary, and Mohamedali and his colleagues set out to commercialise the new, simpler technique for extracting antibodies. It didn’t pan out, but the experience was valuable nonetheless.

After completing a PhD at Sydney’s Children’s Medical Research Institute, in which he focused on the biochemistry of a genetic disorder called Rett syndrome, Mohamedali returned to Macquarie to [keep studying the proteins in blood](#).

One of his key current projects – which is slowly moving towards commercialisation – is a protein-based blood test for colorectal cancer, which at present is diagnosed mainly via faecal samples sent through the post.

“People don’t want to poop in a cup,” says Mohamedali. Only “about 40%” of people send in their samples for testing as recommended. “But they do blood tests without a second thought.”

On top of his day jobs in research and teaching, Mohamedali keeps up a busy schedule of extra-academic projects. There’s a catering equipment business that he runs with his wife and his brother, a charity that does aid work in Africa and the Middle East, and an after-hours community school in his neighbourhood.

This work, he says, has taught him skills that a lot of scientists don’t have.

“We don’t get training on taking research to the real world or training on leadership. We are expected to learn these things as we go along.”

So in 2016, when he heard that Macquarie was planning a subject on just these skills for [Master of Science](#) students, he leapt at the chance: “It was a brilliant intersection of my two worlds.”

The subject started with two students in the first semester of 2017, and grew to 10 in second semester.

“We get guest lecturers who are working in the field, who have started businesses. We had [\[Professor\] Jim Patrick from Cochlear](#), one of the team that built one of the first cochlear implants.”

The goal is to give the students the tools to make their ideas a reality.

“You can write awesome papers in science,” he says, “but if that’s not translated to people it will never be useful. It’s from my failures that I’ve learnt that.”

See the original story here: <https://cosmosmagazine.com/biology/abidali-mohamedali-the-biologist-and-entrepreneur-who-wants-to-give-back>